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ABSTRACT

As part of the 1978 amendments to the Elementary and Secondary Education Act of 1965, a comprehensive study of the Department of Defense Dependents Schools (DoDDS) was mandated by the 96th Congress. The objectives were to determine the educational quality of DoDDS, the relation of student progress to expectations, the availability of resources and facilities, the effectiveness of the organizational structure, and future factors affecting DoDDS. Data were obtained from a multidimensional matrix approach involving a mail survey of principals, selected site visitations, and indepth case studies, along with a comparative survey of stateside resources. The result is a four-volume report, the first of which presents the findings of the study in 14 chapters covering the following topics: (1) study methodology, (2) quality of education, (3) special services and programs for students with special needs, (4) special education, (5) testing and evaluation, (6) student achievement and attitudes, (7) staffing and staff development, (8) physical assets of DoDDS, (9) pupil transportation, (10) other aspects of support services (support of the military community, student feeding programs, advisory bodies, (11) stateside resources comparison, (12) budget and finance, (13) decision making and policy development, and (14) structure and organization. (TE)

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REPORT OF THE COMPREHENSIVE STUDY OF THE DEPARTMENT OF DEFENSE DEPENDENTS SCHOOLS

SOCIAL SCIENCES DIVISION
ADVANCED TECHNOLOGY, INC.
RESTON, VIRGINIA

MAY 31, 1983

EA 016 495

REPORT OF THE COMPREHENSIVE STUDY OF THE DEPARTMENT OF DEFENSE DEPENDENTS SCHOOLS

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CHAPTER 1

STUDY METHODOLOGY

INTRODUCTION

A Comprehensive Study of the Department of Defense Dependents Schools [DoDDS] was mandated by the 96th Congress as part of the 1978 amendments to the Elementary and Secondary Education Act of 1965. The general objectives of the study were to determine:

- The extent to which DoDDS offers a broad, equal, and quality educational opportunity to students, and the degree to which these opportunities meet student needs and community expectations
- The extent to which student progress in the development of skills, behaviors, and attitudes is related to student needs and educational expectations
- The degree to which resources and facilities are available, equitably distributed, and effectively utilized to provide quality educational programs in an overseas setting
- The degree to which organizational structure and management practices are appropriate and effective in facilitating the delivery of quality educational programs
- The extent to which DoDDS will be affected by future factors and recent trends in American life, military planning, and host country politics

In April of 1982 Advanced Technology, Inc. and its subcontractors--George Washington University, the University of Southern California, the Center for Studies in Social Policy, and Westinghouse Information Services--were awarded a 14-month competitive contract to conduct this assessment. These issues were to be studied within the context of the five operating subsystems of DoDDS (i.e., education, personnel, finance, logistics, and executive services).

The Department of Defense Dependents Schools is an elementary and secondary school system established within the Department of Defense [DoD]. The purpose of this system is to ensure that the education of the children of military service personnel and civilian employees does not suffer when families are authorized to accompany the sponsor on an overseas military assignment. Title XIV, the "Defense Dependents Education Act of 1978" of Public Law 95-561 established DoDDS and mandated the system to establish certain programs.

The concept of providing education to military dependents dates back to the 1860s; however, it was only as recent as 1965 that the concept of a cohesive, standardized school system was acted upon. Until that time elementary and secondary educational activities were sponsored independently by each service's major command. In 1965 the Office of the Assistant Secretary of Defense (Manpower and Reserve Affairs) provided policy direction for overseas dependents schools and divided the worldwide system into three regions. DoD was given total operational responsibility for this system by Congress in 1976, at which time the Defense Office of Dependents Education was established.

At the time the Comprehensive Study was undertaken DoDDS was a system of 269 schools located in 20 countries worldwide. The system was comprised of a headquarters office (the Office of Dependents Schools), located in Alexandria, Virginia, and six organizational regions.* The worldwide complement of schools and enrollment of elementary and secondary students was distributed among the regions at the opening of the 1982-83 school year as follows:

Region	Regional Office	Enrollment	Schools
Germany-North	Weisbaden, West Germany	44,300	78
Germany-South	Karlsruhe, West Germany	33,900	65
Mediterranean	Madrid, Spain	13,400	32
Atlantic	London, United Kingdom	15,600	39
Pacific	Okinawa, Japan	23,100	40
Panama	Albrook Air Force Base	7,800	15

DoDDS is mandated to provide a high quality education to its students, and in practice uses stateside school systems as one benchmark against which to assess its successes and failures. DoDDS, however, is unlike any stateside system. The uniqueness of DoDDS was summarized by a principal responding to the Comprehensive Study:

> There is an education that is most difficult to statistically record that DoDDS kids receive. Three years living in Germany, Italy, England, and Norway add to the DoDDS program. Field trips to the market, the study of a medieval church or a track meet with host nation students add to one's education a dimension stateside schools would give their best to obtain.

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*The Germany-North and Germany-South regions were consolidated into a single region in January 1983.

PRELIMINARY PROJECT ACTIVITIES

Review of DoDDS Background Information

Prior to contract award and continuing into May 1982 Advanced Technology began to accumulate background material on the DoDDS worldwide school system for review and classification. Key documents obtained include the following:

- Evaluation reports of the North Central Association of Colleges and Schools
- Department of Education Transition Team--Final Report
- Curriculum guidelines including program goals and objectives and approved lists of basic texts and instructional materials
- DoDDS assessments of student achievement, skill development, and attitude surveys
- National achievement test results including SAT, ACT, Metropolitan Readiness Tests, NAEP reports, and the High School and Beyond Study
- Five-year curriculum development plans and reports
- School staffing reports
- Resource and facilities surveys
- School, Regional, and Headquarters Office records and reports
- Regulations, manuals, and administrative instructions
- Reports of the General Accounting Office and Defense Audit Service

All documents were reviewed by senior staff and classified in terms of the key subsystems of the study, i.e., personnel, finance, logistics, education, and executive services. These resources formed the core of the project's management information system.

Formative Interviews

Immediately after contract award and concurrent with the document review activity, informational interviews were conducted by senior project staff with key personnel in the Office of Dependents Schools [ODS]. Nearly 50 such interviews were conducted involving personnel from the Office of the Director, and from the Divisions of Executive Services, Education, Personnel, Logistics, and Finance. The interviews served to identify and refine information requirements and issues of concern to Headquarters staff. These interviews also helped establish the relative priority of the issues under the 64 topics enumerated in the work statement and identify the relationships among them.

Individual interviews were also conducted with members of the National Advisory Council on Dependents Education during the course of their meeting in Washington in April of 1982. These interviews added an important practitioner perspective to issues identified by ODS staff.

Site visits were conducted in each of the six DoDDS regions during May and June of 1982 to identify and evaluate issues beyond the Headquarters level. In each region, interviews were conducted with the Regional Director, Deputy Director, and numerous personnel within the Divisions of Administrative Services, Education, Personnel, Financial Management, and Logistics. In addition, individual schools were visited and interviews conducted with the principal, key administrators, and teachers. Major Military Commands were also visited in the spring of

1982 to further inform the identification of critical issues and subsequent development of the research design.

Reanalysis of Extant Data

As is true of the other preliminary project activities, the reanalysis of extant data had a direct and substantive input to the study design. Two components made this possible: (1) the ongoing refinement and prioritization of study issues and research questions and (2) the generation of data used directly in this report.

The Defense Manpower Data Center's 1978 Omnibus Survey of military personnel comprised one source of extant data for which secondary analysis was performed. Of particular interest and relevance to the Comprehensive Study were those survey items concerning (1) likelihood of extending military service and (2) rating the quality of schools for dependents. The data set was screened to include only those personnel with dependents. Separate cross-tabulations were obtained for officers, NCOs, and other enlisted personnel. Items were cross-tabulated with each other and individually by last overseas location. The original response categories were collapsed to exclude nonrespondents and irrelevant geographical areas from the percentage distributions.

Another major secondary analysis effort concerned the High School and Beyond Study. This data base was examined in an effort to determine comparability of DoDDS and stateside school students in terms of availability of courses. The relationship of course work and other background factors to student achievement levels was also examined for both DoDDS and stateside students. The methodology employed in the reanalysis of the High School and Beyond Study is described in detail in Chapter 6.

Advisory Panel

An Advisory Panel consisting of eight individuals was chosen by Advanced Technology to serve as an independent technical advisory group to the project staff. Panelists were nominated to provide expertise across the following areas:

- Stateside school district administration
- Education policy analysis
- DoD policy analysis
- Research methodology and design

Summaries of the expertise of the panel members (identified below) are provided in Exhibit 1-1.

RADM John L. Butts, Jr.
U.S. Navy Retired

Dr. John M. Luke, former Superintendent of Schools
Chicopee, Massachusetts

Dr. Edward J. Meade, Jr.
Ford Foundation

Dr. Floretta McKenzie, Superintendent of Public
Schools, District of Columbia

Dr. William S. Pierce, Executive Director
Council of Chief State School Officers

Dr. Corrine Rieder, Federal Relations Officer
Columbia University

Dr. David Segal, Professor of Sociology and of
Government and Politics, University of Maryland

Dr. Mady Segal, Professor of Sociology
University of Maryland

Rear Admiral John L. Butts, Jr., USN (Ret)

Admiral Butts has served in the European theater as Director of Operations to the Commander-in-Chief Navy Europe and as Executive Assistant to the Commander-in-Chief Navy Pacific and as Commander of a carrier group. He has an extensive background in all aspects of military personnel, logistics and fiscal policy, and practices.

Dr. John M. Luke

Dr. John Luke has served as Superintendent for the Chicopee Public Schools in Massachusetts, and for school systems in Pennsylvania and Minnesota. He had served as a representative to the NATO conference from 1978 to 1981. In 1981, he was a member of a review team which performed a DoDDS regional compliance evaluation.

Dr. Edward J. Meade

Dr. Meade has been a Senior Program Officer with the Ford Foundation in the area of educational improvement and policy since 1960. In 1962 he was a member of a research team which performed an evaluation of DoDDS, and in 1963-64 he served on the Defense Advisory Committee on Education. In addition, he has served for three years as a member of the Secretary of the Navy's Advisory Board on Education and Training (SABET) and in 1969 was a special consultant to the then Secretary of HEW, Robert Finch.

Dr. Floretta McKenzie

Dr. McKenzie is currently Superintendent of Schools in Washington, D.C. Prior to this she served as Assistant Secretary for School Improvement within the U.S. Department of Education.

Dr. William S. Pierce

Dr. Pierce is the Executive Director of the Council of Chief State School Officers. He has held positions as a Deputy State Superintendent of Schools in Michigan and, while with the U.S. Office of Education, he served as Acting Commissioner, Deputy Commissioner, and Associate Commissioner.

Dr. Corrine Rieder

Dr. Rieder is currently Federal Relations Officer of Columbia University. She has formerly served as Vice President of Banks Street Teachers College and as a consultant to the Ford Foundation. Prior positions include serving as Executive Director of Youthwork, Inc., and, while with NIE, being responsible for Vocational/Career Education Programs.

Dr. David Segal

Dr. Segal is currently a Visiting Scientist with the Brookings Institution. Prior experiences include a position as Chief of the Social Processes Technical Area at the U.S. Army Research Institute, where he was responsible for all aspects of social science research within the Army.

Dr. Mady Segal

Dr. Segal is currently an Associate Professor of Sociology at the University of Maryland. Formerly she held research positions with the Department of Military Psychology, Walter Reed Army Institute of Research, and at the Army Research Institute for the Behavioral and Social Sciences. She is a specialist in issues relating to family adjustment in military settings.

EXHIBIT 1-1

SUMMARY OF ADVISORY PANEL MEMBERS' EXPERTISE

BEST COPY AVAILABLE

The Advisory Panel met twice at Advanced Technology's Reston facility during the course of the project. At the first meeting in July of 1982 all aspects of the study were presented in an initial overview including progress to date and activities yet to be accomplished. Particular attention was given to the refinement of study issues, the development of specific research questions, and the appropriateness of various data collection methodologies to individual research questions. The guidance received from the Advisory Panel represented a major milestone in the formulation of research questions and the data collection approach.

The panel met again in March of 1983 to review study findings and full drafts of the final reports. Guidance was received regarding possible revisions to the draft reports, additional analyses, alternative interpretations of the data, and the implications of draft recommendations.

RESEARCH DESIGN

Formulation of the research questions employed a multidimensional matrix approach. At the first level of this matrix the five operating subsystems of DoDDS were superimposed on the five major study issues with the following result:

	Education	Personnel	Logistics	Finance	Executive Services
Educational Opportunity	x	x	x		
Student Progress	x				
Resources & Facilities		x	x	x	
Structure & Management	x	x	x	x	x
Future Factors	x	x	x	x	x

This first level provided direction as to the concepts that should underlie the research questions and indication as to where in the system evidence would be found to address the study issues.

A framework was then developed outlining in general terms the components of each study issue and the aspects of the system that required measurement. For example, under the issue of educational opportunity it was determined that data would be required describing quality, access, and delivery regarding the educational programs, the staff, and the facilities. Under resources and facilities, data requirements were categorized as pertaining to planning, providing and monitoring the personnel, logistics, and finances of the system. The net result of this was a matrix of 46 cells in which research questions were formulated. For each research question, data sources and collection methods were specified.

The next steps in the design process included issue synthesis and prioritization. Issue synthesis involved identification of cross-cutting issues spanning the five organizational subsystems and research questions that appeared in more than one cell. Research questions were ranked according to the direction in the scope of work, information acquired through the interviews, further review of the background materials, and the advice of the Advisory Panel and Project Officer. From this point measures were described for each research question, priorities re-examined, survey items specified, and priorities again re-examined in light of respondent burden.

This process ensured that while the study would be comprehensive it would be targeted at the most significant and critical issues. This process also provided a framework for later analysis of the data.

SAMPLE SELECTION

Mail Survey of School Principals

The mail survey of school principals consisted of a universe sample involving all 269 schools in the DoDDS system. A matrix design was employed as a means of reducing respondent burden. The decision as to which school principals received which of two versions of the questionnaire was made by rotating systematically through the entire list of schools stratified by region. A random half of the principals therefore received version A of the survey questionnaire and the remaining half version B.

Representative Site Visitation Sample

The representative visits to 40 sites required that a stratified random sampling technique be employed. A proportionate stratified sample was selected using probability methods after grouping all schools by the following variables: (1) DoDDS region, (2) predominant military service, (3) distance in hours from Regional Office, and (4) enrollment size of school. The respondent sample is illustrated in Exhibit 1-2.

Once the 40 schools were selected using this procedure, respondent selection within schools was performed. Certain respondents, such as the principal, cognizant Base Commander,

REGION	UNIVERSE	SAMPLE
Germany-North	75	11
Germany-South	65	9
Mediterranean	34	6
Atlantic	40	5
Pacific	40	6
Panama	15	3
SERVICE		
Air Force	112	15
Army	117	19
Navy	27	4
Marines	13	2
DISTANCE		
< 2 Hours	125	18
2-6 Hours	58	10
> 6 Hours	86	12
SIZE		
< 400	141	20
400 or More	128	20

EXHIBIT 1-2

COMPARISON OF CHARACTERISTICS OF DoDDS UNIVERSE TO REPRESENTATIVE SAMPLE OF 40 DoDDS SCHOOLS

Base Engineer, and Civilian Personnel Office [CPO] Director were chosen with certainty since they are the only persons filling those roles for each site. All teachers at each school received the survey questionnaire. For the remaining respondents, however, random sampling was again employed. Upon arrival at each site, interviewers were furnished with rosters of teachers, specialists, parents, students, and School Advisory Committee [SAC] members. Then the following standard random sampling steps were followed:

- Determine the total eligible population for each respondent category from the roster provided.
- Divide the total eligible population by the required number of respondents to determine the sampling interval.
- Randomly select a starting point (from a random number table) equal to or less than the interval, which becomes the first respondent selected.
- Add the skip interval to each succeeding number to select all remaining respondents.

Precise written instructions regarding random sampling, definitions of each category of respondents, and a random number table were provided all interviewers.

Case Studies

Case studies were intended to expand the depth of the information base in regard to specific issues; as such, sites for the case studies were purposively selected. Information for selection was acquired through previous project activities and the suitability of each site in terms of the topical areas of concern. Considerable guidance regarding possible sites for case studies was received from ODS and Regional Office personnel. Exhibit 1-3 identifies the sites selected under each of the case study topics. A random sample of 20 special education student files was selected for data abstraction at all sites visited for the quality of education case study.

Major Commands, and Military Finance and Accounting Offices, were additional samples involved in the data collection effort for the project. All Major Commands having cognizance over DoDDS-related activities were included in that sample. All local finance and accounting offices serving the 40 schools in the representative sample as well as three major finance and accounting offices in Upper Heyford, England; Torrejon, Spain; and Swetzingen, Germany (USAFACEUR) were sampled. Interviews at each site were held with a cross-section of persons performing DoDDS-related functions in these offices.

Stateside Resources Comparability Survey

Five respondent universes were designated for the resources comparability survey of stateside education agencies. These are described below with indication of whether sampling was required and the number of administrative units surveyed for each category of respondent.

- Local Education Agencies [LEAs] of comparable size to DoDDS. Size was defined as enrollment being ± 50 percent of DoDDS' enrollment (70,000-210,000) and the number of schools being ± 50 percent the number of schools operated by DoDDS (137-410). Fifteen LEAs met these criteria and were included with certainty.

TOPIC	NO. OF CASE STUDIES	SITES
Regional Office Management	5	5 Regional Offices
Quality of Education	5	11 Schools, 2 Educational Service Centers
Pupil Transportation	2	2 Regional Offices, 3 Schools
Military Community and School Interface	2	2 Schools and Cognizant Local Support Services
Management Information	1	1 Regional Office, 3 Schools
School Construction	1	1 Military Engineer Division, 1 Regional Office, 2 Construction Projects
Overcharging for Support Services	2	2 Regional Offices 2 Schools
Host Country Schools as Alternatives to DoDDS	1	1 School and Its Community

EXHIBIT 1-3

PURPOSIVE SAMPLE FOR CASE STUDIES

- LEAs with concentrations of small schools comparable to DoDDs. The universe was defined as LEAs with the total number of schools in the LEA between 137 and 410 and the proportion of small schools most like DoDDS. The six districts meeting these criteria were randomly selected for the survey.

- The three LEAs closest in size to each of DoDDS' six regions where size was measured first by total enrollment and second by average school enrollment. The 18 districts meeting these criteria were included in the survey.

- LEAs of comparable size to DoDDS regions with high concentrations of students from military families. High concentration was defined by the proportion of military impacted enrollment. The six districts having the highest military impact were included in the study.

- Statewide school systems of comparable size to DoDDS were studied (using a modified version of the LEA survey instrument). Comparable size was defined as having between 137 and 410 schools and enrollment between 70,000 and 210,000. Seven states and the District of Columbia met these criteria and were surveyed with certainty.

INSTRUMENTATION

A package of 20 instruments was developed for the DoDDS Comprehensive Study. Included in this package were 2 versions of a mail questionnaire sent to all school principals in the 6 DoDDS regions; a series of 10 interview instruments used to collect data from respondents at the 40 sites in the representative sample; 2 instruments for documentation of interviewers' observations; a resources comparability survey form for Local Education Agencies and an analogous form for state education agencies; less structured protocols for use in the 20 case studies (including the Major Command and Military Finance and Accounting Office visits), and a data extraction form for reviewing special education needs.

A pretest of all the draft interview and survey instruments was undertaken in September 1982 in Frankfurt, Hanau, and Bad Kreuznach, West Germany. The pretest indicated that a single comprehensive instrument should be used to collect data from principals and assistant principals since the duties assigned to assistant principals vary from school to school. This allowed individual principals to decide which questions would be best addressed by the assistant principals. As a result of the pretest of the mail survey instrument, the questionnaire was separated into two versions, each containing the same core items for all areas of inquiry but with one version probing more extensively into educational issues and one with an in-depth focus on administrative and logistical concerns. Also it was observed that many of the data elements contained in the base commander instrument could be obtained in a discussion with the Schools Officer. Base commanders were thus advised that, for questions regarding operational issues, the Schools Officer could be designated to respond to those items.

The pretest also provided information on the following aspects of all draft instruments tested:

- Feasibility of the instruments to collect the desired data
- Preliminary item content
- Appropriateness of items to measure the desired phenomenon
- Preliminary instrument format
- Actual administration time required for the purpose of estimating respondent burden

Respondent selection procedures were also discussed with school principals during the pretest. It was decided that to ensure randomness interviewers would select respondent students, parents, teachers, specialists, and School Advisory Committee members from current rosters available at the schools rather than having school personnel draw these samples prior to site visits.

Mail Survey of School Principals

Both versions of the mail survey form consisted of 105 individual items. Approximately one-third of the questions were identical across questionnaires with the most critical questions for each topic of interest included in both versions. This ensured that, to some degree, all issues were addressed in both versions and permitted later analytic comparisons of the two portions of the sample. The remaining two-thirds of each form focused in-depth on particular issues.

Version A of the principal survey focused more extensively on educational and instructional issues. For example, while both surveys asked basic questions about the five-year curriculum development process, version A included several more detailed and specific questions about the process. Similar patterns exist in such areas as quality of instruction, graduation requirements, use of specialists, and other educationally oriented activities.

Version B emphasized administrative and support services, and it included detailed questions about personnel, student transportation, budget preparation, facilities, and school safety.

Instrumentation for the Representative Site Visitation Sample

The instrumentation for the representative visitation sample consisted of a 14-part package of interview protocols and observation forms. The specific respondent for whom each interview was designed and the number of items within each interview instrument are presented in Exhibit 1-4.

The focus of the items taken as a whole was similar to that described for the principal survey. The content varied from instrument to instrument to reflect the varying experience of different respondents. The interview instruments included probing questions impossible in a mail questionnaire.

Case Study Protocols

The intent of the case studies was to allow an in-depth examination of cross-cutting issues, to provide answers to research questions from a multitude of perspectives, and to gain a better understanding of the functioning of the system. Case study protocols were developed for each of the following areas:

- Regional Office management
- Quality of education
- Pupil transportation
- Military community and school interface
- Management information in DoDDS
- School construction
- Circumstances of overcharging for support services
- Host country schools as alternatives to DoDDS

INSTRUMENT TYPE AND RESPONDENT	MAXIMUM NUMBER OF RESPONDENTS AT EACH SITE	NUMBER OF ITEMS
Interviews		
Principal	1	339
Teacher	3	141
Specialist	3	173
Parent	5	48
Student (Grades 1-4)	6	15
Student (Grades 5-12)	6	26
SAC Member	1	39
Base Commander	1	12
Base Engineer	1	60
Civilian Personnel Office Director	1	55
Observations		
Classroom	2	2
School Walkthrough	1	10
Survey Questionnaires		
Teacher	All	58
Parent	1 per 10 students	11

EXHIBIT 1-4

CHARACTERISTICS OF DATA COLLECTION INSTRUMENTS
FOR REPRESENTATIVE SITE VISITS

For each case study, general issues to be examined and specific research questions to be answered were developed. The special education student abstract form was provided as part of the quality of education case study protocol.

The development of the case study protocols represented the culmination of the synthesis of issues process which began upon contract award. The development of case study protocols benefited from the considerable insight gained from the representative site visits. As a result of this added knowledge the draft protocols were refined to reflect the most current and critical aspects of each particular focus of study. Instrumentation for the case study data collection activity at major Military Commands and Finance and Accounting Offices consisted of largely unstructured interview instruments which, while requesting much specific background data, also contained numerous open-ended questions.

Stateside Resources Comparability Survey

Design of a data collection instrument for the stateside resources comparability survey posed unique problems. This was the only component of the study for which primary data collection from stateside school systems was to be undertaken. Unlike other data collection activities, participation in this survey fell outside the purview of the sponsoring agency (DoDDS). Design of this questionnaire required developing a reporting framework that (1) would measure stateside resources in categories that could be compared to the DoDDS operating structure and (2) would isolate from stateside data resources expended for functions not comparable with DoDDS functions.

Two instruments for abstracting data from publicly available local education agency [LEA] and state education agency [SEA] documents were developed. The instruments covered four areas of inquiry: operational data, student data, staffing data, and financial data. Data were specified for three fiscal years, primarily to permit validation of abstracted financial data across budget cycles.

INTERVIEWER SELECTION AND TRAINING

Interviewers for both on-site data collection activities were selected from the senior level research personnel and faculty of Advanced Technology and its subcontractors. Of primary concern in the selection of interviewers was the degree of prior experience and familiarity in three critical areas: educational research; structured interviewing or case study methodology, as appropriate; and the general environment and specific contextual concerns of DoDDS. Advanced Technology staff were selected by the Project Director. Selection of university faculty was done by the respective Dean or Department Chair of the participating institutions.

Training for the representative site interviews was held for three days (September 29 to October 1, 1982) at Advanced Technology's Reston, Virginia, facility. Each interviewer was provided with a procedures manual that served as both a training aid and a field guide.

Thorough coverage of each content area was provided during training by the person on the project team with the greatest amount of experience and expertise in that particular area. Interviewing techniques were thoroughly discussed and practiced by reviewing each instrument in a lecture format and then through role play activities. These activities familiarized the interviewers with the instruments and provided the technical and procedural details necessary for data collection in light of any situational contingency. Field procedures, data management, data recording and editing, and transmittal of data back to Advanced Technology in Reston, Virginia, were covered. Travel procedures, such as use of rental cars, lodging arrangements, and travel advances were also presented.

For the case studies, substantial familiarity and experience in specific content areas were the primary criteria used for selection of interviewers. Case study teams were paired according to these specific criteria:

- Teams should represent the broadest possible expertise
- Teams should be insulated against possible "institutional biases"; thus two staff members from the same organization were not teamed together.

Case study training, held on October 28 and 29, proceeded in much the same fashion as that for the representative visits. All case study team members received training in case study methodology and report requirements. A brief overview of each case study topic was presented by one of the project team members to highlight the larger cross-cutting or synthesis issues of the study. Individual case study teams carried out thorough in-depth reviews of the protocols and the purpose of case studies for the team's topic areas.

DATA COLLECTION PROCEDURES

Background Information

Upon award of contract ODS provided Advanced Technology with copies of all reference materials cited in the contract's Statement of Work. Members of the ODS staff interviewed during the formative stage of the project (May and June 1982) were asked to describe the details of the offices' functions and to suggest additional data sources that should be included in the project files. Where such sources were still in draft form, ODS staff were requested to provide copies of these documents once finalized and approved for formal circulation. By limiting background data collection to only finalized documents, it was possible to ensure that the study assessed DoDDS as it was operating during the early months of the 1982-83 school year and not as it might operate at some future date.

Mail Survey of School Principals

A mail survey of all school principals throughout the six regions was undertaken in the fall of 1982. Prior to mailing, each questionnaire was assigned a seven-digit identification number, printed in the upper right-hand corner, to facilitate tracking, logging in, follow-up mailing, and analysis of the principal survey.

During early phases of the project all principals were notified through DoDDS of the plans for a mail survey. It was initially sent out on November 1, 1982, and included a cover letter from the Project Director. This letter explained the nature and purpose of the survey, requested cooperation, and assured confidentiality of data received. A preprinted, prepaid return mailer was also provided with the questionnaire. Upon receipt the completed instruments were logged in by identification number, tallied, and filed in secure cabinets within the data storage room. Any incomplete forms were identified during the log-in process, suitable explanations were recorded, and the forms were removed from the file.

A follow-up letter, another questionnaire of the same version, and return envelopes were sent to all nonrespondents on December 13, 1982. As of that date the response rate stood at 61 percent. Finally, phone calls to Regional Deputy Directors or other appropriate contact persons were made in mid-January to increase the number of responses. The final response rate for the mail survey rose to 96 percent.

Representative Site Visits

The interviewers visited a total of 40 randomly selected schools, 28 associated CPO offices, 38 associated military engineering offices, and the 37 cognizant commands throughout the six DoDDS regions, from October 4 through October 22, 1982. Each of the 12 interviewers was assigned to visit 3 or 4 schools, depending upon the number of days required for data collection at each site. The usual length of time spent at each school was three days, although four days were required at several of the larger schools. The total number of interviews, observations, and surveys completed by respondent type during the representative site visits is presented in Exhibit 1-5.

Interviews were scheduled by the interviwers when they arrived at each site. The teacher drop-off surveys were distributed to all teachers on the first day of data collection, and the forms were then completed and returned in sealed envelopes to the data collectors on the third day. Parent surveys were sent home with students on the first day and returned in sealed envelopes to their classroom or homeroom teachers, who returned the entire lot to the data collectors. In both survey efforts confidentiality of the respondents was completely assured. Once all instruments for a site had been completed, interviewers packaged them securely and mailed them back to Advanced Technology in prepaid mailers.

As with the mail questionnaire, all representative site instruments were assigned identification codes to facilitate the tracking, logging in, and subsequent analysis activities. The seven-digit number included a two-digit code for instrument type, a two-digit code for the school, and a three-digit code for the respondent number. When completed interview packages were returned to Advanced Technology, a transmittal form containing these identification numbers for the completed instruments was included as the cover sheet to facilitate subsequent data management.

INTERVIEW RESPONDENT	NUMBER OF COMPLETED INTERVIEWS	RESPONSE RATE (PERCENT)
Principal	39	98%
Teacher	113	94%
Specialist	83	69%
Parent	163	82%
Student (Grades 1-4)	112	99%
Student (Grades 5-12)	126	99%
SAC Member	37	92%
Base Commander	35	95%
Base Engineer	37	97%
CPO Director	28	100%
OBSERVATIONS		
Classroom	78	100%
School Walkthrough	40	100%
DROP-OFF QUESTIONNAIRES		
Teacher	698	80%
Parent	1,206	69%

EXHIBIT 1-5

NUMBERS OF COMPLETED INTERVIEWS AND QUESTIONNAIRES
FROM REPRESENTATIVE SITE VISITS

Case Studies

As noted previously, eight specific areas were addressed by the case study methodology. Case study reports were prepared after site visits to five of the DoDDS regions by six two-person teams. They prepared, at minimum, case studies on the Regional Office and on the quality of education at one or more of the schools visited. In addition, other case study topics were addressed in certain regions, as appropriate. For example, a case study topic such as host country alternatives to DoDDS schools was relevant only at selected sites.

Depending on such factors as focus of inquiry, complexity of the respondent base, and the size of the school, case study teams dedicated one to five days to a topic. All six teams were on site from November 1 through November 17, 1982.

Project staff undertook data collection activities at Major Commands and Finance and Accounting Offices from October 4 through November 9, 1982. Approximately 70 unstructured interviews were completed for this case study.

Stateside Resources Comparability Survey

This survey involved a comparison of staff and financial resources between DoDDS and 7 state and 41 local education agencies. A letter from the Director of DoDDS was sent to the superintendents of all education agencies in the sample, providing information about the Comprehensive Study, the Stateside Survey, and the importance of securing the superintendents' cooperation. An abstracting protocol and a letter from the

Project Director were sent. The cover letter referenced the Director's letter and provided more specific information about the comparability survey. Respondents were requested to review the protocol and identify the information requirement and to send those publicly available documents which would best fulfill the survey's data needs. The request specifically identified such items as annual reports, statistical summaries, and budgets. Prepaid return envelopes were provided to facilitate response.

Upon receipt, project staff thoroughly examined all documents, and relevant data were extracted. A first iteration of completing the survey instrument was accomplished for all respondents before any follow-up activity was initiated.

Partially completed instruments were reviewed against the source documents, and specific data elements not available were recorded. The superintendent or other appropriate officer such as the business manager, personnel director, or planning officer was then phoned to request either like documents for the missing year(s) or information to complete one or more specific survey items. The latter request was made only when data requirements were relatively few and straightforward, thereby ensuring no undue burden on the respondent. If data for an entire year or section of the survey were missing, a request was made for specific documents. After the phone follow-up procedures the instruments were completed and prepared for analysis.

DATA PROCESSING

Several procedures were employed to maintain a high level of quality control over the coding of the study's raw data. First, editing and coding of the open-ended items on the mail questionnaires and the interview instruments were performed by specially trained staff members. A series of test protocols were coded. For high volume instruments, test coding was practiced until intercoder reliability was at least 90 percent. Low volume instruments were assigned to a single coder. All instruments were manually validated to verify proper skip patterns, ranges, and other requirements. While coding was in process, senior staff reviewed coded instruments to verify accuracy and thoroughness.

Data from the mail surveys of principals and from interviews and observations conducted at the 40 representative sites were converted to numeric codes and then keypunched onto magnetic tape. Keypunching for all instruments was preprogrammed so that invalid key strokes (e.g., unacceptable code in a given field) could not be registered. Both manual and automated verification were performed. All data underwent a preliminary frequency check on all variables using the Statistical Package for the Social Sciences [SPSS] to identify data elements out of legitimate ranges.

The data files that were created are accessible either by SPSS or the Statistical Analysis System [SAS]. File documentation was integrated into the data base. Data for each interview sample were stored on a separate file that contained an appended series of demographic variables for the related site. Subfiles for comparison of responses from different individuals at the same site were created through site specific codes on each record.

ANALYSIS

Data collected from the mail surveys of principals and representative site visits were subjected to a variety of analyses described in this section. Analytic techniques employed for the High School and Beyond Study and Stateside Resources Comparability Survey data bases are presented in their respective chapters.

Descriptive analyses consisted mainly of distributions and summary statistics for variables. For continuous data, such as miles traveled by school buses, variables were described in terms of frequency distributions, cumulative distributions, and statistics summarizing central tendency and variability in the data. For categorical or nominal items, such as mode of participation in the five-year curriculum development process, percentages of cases falling into different categories were computed.

Once overall descriptions were obtained, attention turned to ascertaining whether the patterns observed in the dependent variables remained constant within various subgroupings. For example, it was informative to know whether the worldwide percentage of teachers having guidelines to interpret test results characterized all six regions equally well. For categorical data, contingency tables with chi-square tests of significance were used to assess the relationships among variables. For continuous data, correlations were computed to indicate relationships among pairs of variables. Scattergrams and conventional multiple regression analyses were among other techniques used in a more limited manner.

Information obtained through the case studies was used as a reference, particularly in the interpretation of analytic results. This information contained the greatest depth and thus proved to contain the most powerful descriptors of factors influencing the results observed in the mail survey and interview data. Extreme caution was observed by analysts when introducing these data into the analysis to ensure that rules of generalizability were not being broken.

The overall organization of these tasks was undertaken with reference to the analytic framework within which research questions and individual instrument items had previously been aligned.

PROJECT REPORTING

Formal project reporting activities involved both written submissions and oral briefings. Monthly progress reports reviewing the preceding month's progress, outlining activities to be undertaken in the succeeding month, and noting apparent or anticipated problems were deliverd to the Project Officer.

In addition to these reports the project team provided briefings throughout the life of the project beginning in early summer 1982 and continuing through submission of the Final

Report. Among those briefed were the Project Officer, the DoDDS Director, the Deputy Assistant Secretary of Defense for Military Personnel and Force Management [MRA&L], and interested congressional staff on the House Committee on Education and Labor and the House Committee on Government Operations. While the project team maintained a continuous process of information sharing with DoDDS on such items as preliminary findings and recommendations as they emerged, such communication remained within the congressional mandate for a truly "independent" study of the system.

The final products of the study are four reports: this "Report of the Comprehensive Study of the Department of Defense Dependents Schools," "Future Factors Affecting the Department of Defense Dependents Schools," an "Executive Summary," and the "Report on Legislative and Funding Recommendations."

CHAPTER 2

QUALITY OF EDUCATION

OVERVIEW

One of the purposes of the congressionally mandated Comprehensive Study, as expressed in the Request for Proposal, was to determine "the extent to which DoDDS offers a . . . quality educational opportunity to students . . . ." The constituent parts of educational quality and, more important, the key driving variables--and the causal relationships among those variables of educational quality--are subjects of considerable disagreement in the educational community.

Chapter 2 is divided into three main sections: Program Quality, Principal as Instructional Leader, and Curriculum Development Process. The first section, Program Quality, is further broken down into subsections: Perceptions of Instructional Quality, Materials Quality, Instructional Management, and School and Classroom Discipline. Other chapters in this report deal with additional aspects of educational quality (e.g., student performance, staff qualifications, etc.).

PROGRAM QUALITY

Perceptions of Instructional Quality

An important feature of the Comprehensive Study was the measurement of the quality of instruction according to the various clients--students, parents, teachers, and school administrators. Quite apart from objective measures of instructional quality, parents' perceptions of DoDDS vis-a-vis stateside and overseas private schools influence re-enlistments, overall satisfaction with life in the overseas military community, and the choice between a DoDDS school and one of the private--and, occasionally, free public--alternatives. Teachers and administrators are successfully recruited and retained, in part, because of their perceptions of the quality of education in DoDDS. Students, particularly at the high school level, see the quality of their instruction from a practical, comparative perspective, that is, "Does my DoDDS education increase or decrease my chances in the marketplace (college placement, vocational skills, etc.)?"

It is significant that when 1,206 parents of DoDDS children were asked to grade DoDDS overall, 50 percent said they would give the system an A or B (A=9 percent; B=41 percent). These figures provide an interesting comparison to a 1982 Gallup Poll (in Phi Delta Kappan, September 1982) in which 1,558 randomly selected adults--not necessarily parents of school-aged children--were asked to grade the U.S. public school system. The Gallup poll found that only 23 percent would grade schools nationwide an with A or B (A=3 percent; B=20 percent). On the other hand, when only parents of school-aged children were asked to grade schools in their communities, 37 percent of that Gallup sample gave their schools a grade of an A or B (A=8 percent; B=29 percent).

Comparisons between the Gallup poll and the DoDDS survey cannot be made with statistical precision because items were worded differently and respondent selection procedures were not the same. These caveats notwithstanding, one is nevertheless struck by the difference in the perceptions of parents of DoDDS and parents of U.S. children. Parents of DoDDS students hold their schools in higher regard than do parents in the U.S.

Another interesting perspective is parents' perceptions of the quality of DoDDS education when they are separated according to region (see Exhibit 2-1). Differences in the perceived quality of DoDDS education appear when parents' views are disaggregated. In Germany-South, 39 percent of parents gave DoDDS an A or B; in Panama the number was 69 percent. When asked to grade teachers in the community, DoDDS parents were even more generous in their approval. In Panama, 83 percent of parents gave teachers in their community an A or B; in the Pacific the number was 62 percent. For the other regions the numbers were Germany-North, 59 percent; Atlantic, 59 percent; Mediterranean 55 percent; and Germany-South, 50 percent.

The opinions of students were analyzed to see if they agreed with their parents about the quality of instruction and, further, to see if the regional differences expressed by their parents prevailed at the student level. Students rated "the quality of teaching in this school compared to your stateside experience" according to region, as shown in Exhibit 2-2.

Only moderate regional differences appear when the opinions of fifth- through twelfth-grade students were disaggregated by region. In three of five regions--Germany-North, Atlantic, and

	A	B	C	D	E	DON'T KNOW	SAMPLE SIZE
Germany-North	8%	42%	28%	4%	1%	17%	461
Germany-South	6%	34%	34%	9%	1%	16%	288
Atlantic	4%	52%	34%	4%	0%	4%	44
Mediterranean	6%	44%	25%	9%	0%	17%	138
Pacific	16%	41%	24%	3%	2%	14%	186
Panama	23%	46%	16%	3%	1%	11%	74

EXHIBIT 2-1

DISTRIBUTION OF GRADES GIVEN BY PARENTS
TO DoDDS OVERALL BY REGION

	GERMANY-NORTH	GERMANY-SOUTH	ATLANTIC	MEDI-TERRANEAN	PACIFIC
Worse	4%	10%	0%	7%	0%
About the Same	48%	67%	50%	50%	53%
Better	37%	20%	36%	29%	40%
Much Better	11%	3%	14%	7%	7%

EXHIBIT 2-2

FIFTH THROUGH TWELFTH GRADE STUDENT RATINGS BY REGION* OF THE QUALITY OF DoDDS SCHOOLS COMPARED TO STATESIDE SCHOOLS

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*Based on student sample size of 126. Number of student respondents from Panama was insufficient for reliable estimation.

Pacific--about half of all students interviewed stated that instruction in their DoDDS school was better or much better than that in their stateside schools. Thirty-five percent of responding Mediterranean students agreed with the better ratings, while in Germany-South only 23 percent felt instruction was better in the DoDDS schools. Thus both students and parents are inclined to rate Germany-South below the other regions.

Fifth- through twelfth-grade students were also asked to indicate if they were ahead, behind, or at about the same level when they arrived at their DoDDS schools. The results of this question are shown in Exhibit 2-3. Approximately two-thirds of the students answered that they were at about the same level except for mathematics, elementary reading, and instrumental music. In mathematics, 30 percent said they were ahead; 26 percent said they were behind. Thirty-six percent of music students said they were ahead, while only 8 percent said they were behind.

In order to discover how well recent stateside transfer students fit into the DoDDS program, a question asking if students were at about the same level, behind, or ahead when they arrived was cross-tabulated with those whose previous schools were in the U.S. Subjects in which large numbers of students felt they were ahead of DoDDS when they arrived include music (33 percent) and mathematics (31 percent). In other subjects, however, two-thirds or more felt the DoDDS schools were at about the same level or ahead of stateside schools.

	AHEAD	ABOUT SAME	BEHIND
Elementary Reading	25%	54%	21%
Writing	12%	73%	15%
Mathematics	30%	43%	26%
Science	19%	60%	20%
Social Studies	15%	69%	16%
Instrumental Music	36%	56%	8%
Choral Music	22%	70%	7%
Art	19%	72%	10%
Physical Education	19%	70%	11%
Vocational Education	8%	75%	17%
Algebra	19%	71%	10%
High School English	27%	67%	7%
Geometry	*	*	*
Calculus	*	*	*
Physics	*	*	*
Chemistry	*	*	*
Foreign Language	*	*	*

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*The number of respondents was insufficient for reliable estimation.

EXHIBIT 2-3

RATINGS BY STUDENTS
OF WHERE THEY RANKED ACADEMICALLY
WHEN THEY ARRIVED AT THEIR DoDDS SCHOOLS

Parents, too, were asked to grade elementary and secondary subject areas, thus providing their perspective on the quality of instruction in areas and grade levels where they may or may not have had firsthand knowledge. When As are combined with Bs, between 55 and 65 percent of the parents thought that the quality of instruction in all subjects except high school vocational training merited a B or better. For the latter, 47 percent gave an A or B. The quality of instruction was perceived best in elementary school reading: 31 percent gave it an A; 40 percent awarded it a B.

When asked to indicate on a scale of 1 to 4 the level of satisfaction for "the way this school is preparing you for either a job or college," 60 percent of the students in grades 5 through 12 said they were satisfied; 12 percent said they were very satisfied; and 4 percent said they were dissatisfied.

Parents of high school students were asked for their opinions regarding the amount of attention their children's schools devoted to six areas. These areas thus provide a proxy for instructional quality by measuring the system's ability to meet certain educational objectives. Exhibit 2-4 presents the results of this question. The areas most frequently cited by parents as not receiving enough attention were: (1) "preparing students who do not go to college for a job or career after graduation" (46 percent) and (2) "developing student moral and ethical character" (44 percent).

When students in grades 5 through 12 were asked to compare the way they were taught in stateside schools to the way teachers

	TOO MUCH	RIGHT AMOUNT	NOT ENOUGH
Developing Student Moral and Ethical Character	2%	37%	44%
Teaching Students How to Think	0%	83%	27%
Preparing Students Who Do Not Go to College for a Job or Career after Graduation	4%	50%	46%
Preparing Students to be Informed Citizens Prepared to Vote at 18	0%	75%	25%
Preparing Students for College	0%	69%	31%
Developing Students' Appreciation of Art, Music, and Other Cultural Interests	3%	59%	39%

EXHIBIT 2-4

RATINGS BY PARENTS OF
ATTENTION DoDDS GIVES TO SIX AREAS

instruct in DoDDS schools, 45 percent felt there was no difference. Other answers to that question--an open-ended, unstructured item--did not occur with sufficient frequency to be significant. A similar question asked students in grades 5 through 12 to rate on a scale of 1 to 5 the overall quality of teaching "in this school compared to your stateside experience." The results were as follows: much worse, 0 percent; worse, 5 percent; about the same, 57 percent; better, 30 percent; and much better, 8 percent. Thus, 95 percent of all responding high school students rated teaching in their DoDDS school as equal to or better than their stateside instruction.

Teachers were also queried for their opinions about the ability of stateside transfer students "to fit easily into the program." Nearly 88 percent said they fit in easily. Of the 17 teachers who thought their children did not fit easily into schools, one-third thought DoDDS schools were ahead of stateside schools.

Principals of all DoDDS schools were surveyed to find their opinions of the quality of instruction in each of the subject areas offered in their schools. Their perceptions are presented in Exhibit 2-5. By far, reading was the subject principals thought had the highest quality of instruction: 94 percent rated it as a 4 or 5 on a 5-point scale of low quality to high quality. The next best instructed subject was language arts, with 86 percent rating it 4 or 5, followed by mathematics with 81 percent.

	LOW QUALITY				HIGH QUALITY
	1	2	3	4	5
Social Studies	0%	4%	24%	50%	21%
Sciences	4%	19%	37%	26%	13%
Mathematics	0%	4%	16%	50%	31%
Computer Education	20%	24%	13%	31%	11%
Language Arts	0%	0%	14%	52%	34%
Reading	1%	0%	4%	34%	60%
Foreign Language	6%	10%	17%	39%	27%
Music	4%	14%	34%	30%	18%
Arts	6%	10%	35%	32%	17%
Humanities	7%	6%	49%	32%	7%
Career Education	6%	23%	44%	21%	6%
Vocational Education	9%	13%	45%	19%	13%
Health	4%	7%	49%	36%	4%
Physical Education	4%	6%	29%	38%	23%
Host Nation	2%	12%	22%	39%	24%
ESL	4%	11%	38%	32%	16%
Compensatory Education	6%	4%	29%	38%	23%
Special Education	1%	3%	12%	52%	32%

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*All percentages are based on responses to the principal mail survey.

EXHIBIT 2-5

RATINGS BY PRINCIPALS*
OF SUBJECTS TAUGHT IN THEIR SCHOOLS

At the other extreme, computer education was regarded as the most poorly instructed subject: 44 percent of principals with that subject in their schools rated it a 1 or 2. One must note, however, that formal computer education had not been introduced into the schools at the time of this data collection. Career education was the next lowest rated subject with 29 percent. Like computer education, career education has been added only recently to the curriculum. Sciences came next with a combined 1 or 2 rating of 23 percent.

Another measure of principals' perceptions of instructional quality is whether they feel high school graduation requirements should be raised. Those strongly favoring raising requirements, plus those who somewhat favor raising requirements, totaled 69 percent; those opposing or strongly opposing raising graduation requirements numbered only 12 percent of responding principals.

Materials' Quality

The quality of materials was examined by asking students, teachers, and administrators to make informed judgments about the quality, currency, and sufficiency of materials in their schools.

Students in grades 5 through 12 were asked to rate the supplies and materials available in their schools on a scale of 1 to 4--very unsatisfactory through very satisfactory. In all categories (quality, variety, and availability of materials and supplies) 85 percent or more of responding students rated them as satisfactory or very satisfactory. The most negatively rated category was variety of materials and supplies: 10 percent felt variety was unsatisfactory.

Students in grades 5 through 12 were also questioned about their use of the media center. When asked, "Do you think your media resource center has the books and other materials and equipment needed?" 87 percent answered yes. A similar percentage, 89 percent, rated the condition of the resource center as good or excellent.

When teachers were asked to rate the quality, variety, and availability of supplies and materials, the vast majority felt they were satisfactory or very satisfactory--specifically: quality, 87 percent; quantity, 69 percent; variety, 69 percent; and availability, 63 percent. Teachers were most critical of the availability of supplies and materials; nearly 13 percent felt availability was very unsatisfactory.

In the same survey, teachers were asked to rate the adequacy of amount of materials, supplies, and equipment for the subjects they teach. Results of that inquiry are shown in Exhibit 2-6.

Subjects receiving the strongest approval (either a very adequate or adequate) were music, 88 percent; reading, 76 percent; and host nation, 72 percent. Those regarded as having the least adequate (inadequate plus very inadequate) materials were computer education, 75 percent; vocational education, 42 percent; and ESL 38 percent. These three programs have, in most instances, been added to individual schools only recently; materials for these programs are thus probably in initial stages of acquisition in many schools. Teachers were asked to indicate their reasons for inadequate ratings, selecting one or more of

	VERY ADEQUATE	ADEQUATE	IN-ADEQUATE	VERY IN-ADEQUATE
Language Arts	13%	57%	22%	8%
Reading	27%	49%	17%	7%
Mathematics	20%	66%	11%	3%
Social Studies	11%	58%	20%	11%
Science	14%	55%	24%	7%
Host Nation	16%	57%	16%	12%
Health	6%	58%	25%	11%
Physical Education	12%	49%	20%	19%
Music	20%	68%	8%	4%
Arts & Humanities	14%	58%	17%	11%
Career Education	8%	54%	24%	14%
Vocational Education	10%	49%	20%	21%
ESL	15%	47%	20%	18%
Foreign Language	13%	56%	22%	9%
Extra Curricular	14%	51%	18%	17%
Special Education	17%	56%	17%	10%
Computer Education	2%	24%	28%	47%
Compensatory Education	10%	59%	16%	16%

EXHIBIT 2-6

RATING OF ADEQUACY
OF MATERIALS BY SUBJECT AREAS
ACCORDING TO TEACHERS OF THOSE SUBJECTS

the following: text, teachers' guide, supplemental materials, management materials, A-V resources, teacher training, supplies, and other. Computer education and vocational educational educators complained most frequently about inadequate supplemental materials and A-V resources. A lack of supplies was particularly criticized by computer education staff. ESL teachers thought all seven categories were nearly equally inadequate. Again, and understandably, newly added curriculum areas were viewed as more inadequate than others.

In response to a question on the currency of supplies and materials, the overwhelming majority of subject teachers indicated their materials were new or recently acquired. Again, the most conspicuous exception was computer education, an area currently being implemented. In that instance, 48 percent felt materials were old or very old; another 24 percent of computer education teachers indicated that there were no materials.

Principals were generally more positive than teachers regarding the quality of instructional materials; 70 percent or more thought instructional materials were adequate or very adequate in all areas except computer education, career education, vocational education, and host nation programs. The inadequate plus very inadequate ratings for those subjects were, respectively; 58 percent, 39 percent, 31 percent, and 30 percent. Complete results are shown in Exhibit 2-7. It should be noted that, in most cases, the curricular areas which received the lowest ratings for quality of instruction and materials were

	VERY ADEQUATE	ADEQUATE	IN-ADEQUATE	VERY IN-ADEQUATE
Social Studies	38%	57%	4%	2%
Science	22%	59%	17%	4%
Mathematics	28%	69%	3%	0%
Computer Education	4%	38%	26%	32%
Language Arts	23%	68%	7%	3%
Reading	45%	50%	5%	0%
Foreign Language	15%	67%	17%	2%
Music	22%	73%	4%	1%
Arts	18%	65%	14%	4%
Humanities	10%	74%	16%	0%
Career Education	3%	58%	32%	7%
Vocational Education	11%	58%	24%	7%
Health	12%	77%	9%	2%
Physical Education	13%	68%	15%	4%
Host Nation	12%	58%	21%	9%
ESL	7%	68%	16%	8%
Compensatory Education	17%	64%	13%	5%
Special Education	20%	70%	8%	2%

EXHIBIT 2-7

PRINCIPAL RATINGS OF
QUALITY OF INSTRUCTIONAL MATERIALS BY
SUBJECT AREAS TAUGHT IN THEIR SCHOOLS

those in relatively rapid expansion or recent in their establishment.

Instructional Management

With 269 DoDDS schools in 20 foreign countries, management of the instructional process is necessarily different, if not more complex, than in U.S. systems. Indeed, the role of the regional-level subject area coordinator is especially unusual because geographical distances and limited travel money may impede his or her accessibility.

Accordingly, the study carefully examined instructional management from the perspective of the principal actors--school administrators, teachers, and regional coordinators. Parents were polled to get their impressions--a grade of A, B, C, D or F--of how well they thought administrators were doing their jobs. In that survey, 17 percent gave As, 40 percent Bs, 30 percent Cs, 10 percent Ds, and 3 percent Fs. Parents, therefore, generally approve of the administrators in their community; only 13 percent said they were below C quality.

Teachers were queried in a number of areas regarding the instructional management process. In response to a question asking how satisfied teachers were with 6 kinds of assistance received from regional coordinators, more than 50 percent of teachers were very dissatisfied. At the other extreme, those saying they were very satisfied were few, generally--less than 5 percent (see Exhibit 2-8).

In order to see if there is a regional relationship in these findings, the same question about satisfaction with services of

	VERY SATISFIED	SATISFIED	DIS-SATISFIED	VERY DIS-SATISFIED
To Determine Course Goals and Objectives	7%	45%	22%	26%
To Select Materials	9%	41%	25%	26%
To Plan Units	4%	36%	27%	32%
To Write Lesson Plans	4%	35%	26%	35%
To Communicate Course Curricula to Parents	3%	34%	27%	36%
To Articulate Curricula between Grades	4%	38%	26%	31%

EXHIBIT 2-8

TEACHERS' RATINGS OF SATISFACTION
WITH KINDS OF ASSISTANCE
RECEIVED FROM REGIONAL COORDINATORS

regional coordinators was disaggregated by region. One argument that was frequently heard in the field was that TDY dollars for coordinators' travel were too few in geographically dispersed regions, and therefore coordinators could not perform up to the level provided by less dispersed regions. The results of disaggregating satisfaction with the services of regional coordinators according to region clearly show differences among regions. Teachers in Panama recorded satisfied or very satisfied responses 65 percent or more of the time for all 6 kinds of assistance. The Atlantic Region, one which covers a large geographic area, rated 5 of 6 categories unsatisfactory or very unsatisfactory 75 percent or more of the time, far more than any other region. In the other two widely dispersed regions, the Pacific and the Mediterranean, the level of dissatisfaction ranked an almost equal second and third, below the level expressed in the Atlantic. After Panama, Germany-South expressed the most satisfaction with regional coordinators, followed by Germany-North. The degree of satisfaction with the services of regional coordinators is highest in the least dispersed regions and lowest in the most highly dispersed regions.

In an interview question asking teachers with whom they interact regarding the Five-Year Curriculum Development Plan, 27 percent of responding teachers said they interacted with regional coordinators or other regional staff. Their responses to other choices were: "other teachers in this school," 37 percent; "principal or other school administrators," 28 percent; and other school-level staff, 26 percent.

In a question asking teachers what type of services school-level specialists provide "for you," approximately 80 percent circled three categories: consultation regarding specific students, testing and evaluation of students, and work with specific students outside classroom. Relatively few teachers, 23 percent, indicated that they receive specialists' services in the classroom.

Coordination of curriculum continuity between and among departments and grade levels was another area in which teachers were queried. When asked in an open-ended question what procedures do you use to ensure continuity, 47 percent said informal teacher interaction. Another 13 percent said the textbook series provides for continuity.

In an open-ended interview question asking teachers to indicate how their curriculum implementation is supervised, about one-third answered "review of lesson plans." The next most frequently offered answer, 16 percent, was "supervised by regional coordinator." A follow-up question asked how frequently supervision was done. Results were: once a year, 15 percent; twice a year, 16 percent; 3 to 5 times per year, 15 percent; a continuous process, 20 percent; and not done, 8 percent. A similar open-ended question, "Do you receive guidance and direction on curriculum matters?" was responded to positively by 58 percent. A follow-up open-ended question to those answering yes asked how guidance was given. Nearly 40 percent answered "from the principal." Bulletins from the regional coordinator was indicated by

15 percent; oral communication with coordinators was mentioned by 11 percent.

The role of the principal is clearly critical to a discussion of instructional management in DoDDS schools. A separate section of this chapter examines this role in detail.

School and Classroom Discipline

Perhaps no other single factor in the mix of elements that facilitate and constitute a good educational program receives more attention than discipline. Because it has become such a prominent issue, especially where discipline is poor, the comprehensive study sought the impressions of parents, teachers, and administrators on the issue of discipline in their schools.

Parents were asked to identify from a list of 12 problems the 1 which they thought was the biggest in their community. Only 10 percent of parents surveyed identified discipline as the biggest problem in their schools.

Teachers were asked to rate discipline in their schools on a five-point scale from "excellent, no problems" to "poor, serious problems." Nearly 80 percent said discipline was excellent or good; less than 4 percent said it was poor. Principals were asked the same questions. Virtually 100 percent said discipline was excellent or good.

THE PRINCIPAL AS INSTRUCTIONAL LEADER

The administrative requirements attendant to running a school on an Army, Navy, or Air Force base in a foreign country necessitate an unusually skillful individual. He or she has frequent--sometimes daily--involvement with repair and maintenance of buildings and equipment, monitoring of local contractors, preparation of detailed current year and out-year budgets, selection of local hires and substitute teachers, etc. Like stateside schools, there is the ubiquitous complaint of administrative burden caused by paperwork requirements from ODS and the regional office.

Teachers were asked a series of open-ended questions about the instructional/curricular relationship they have with their principals. In response to an item asking teachers to describe "the types of professional interaction you have with your principal in regard to curriculum," 29 percent said "explaining my program." A varying 2-6 percent of teachers additionally reported interaction on determining objectives, program, implementation, lesson plans, discussions in faculty and curriculm committee meetings, and during classroom observation. These specific interactions reported by teachers totaled 20 percent of the responses. Thus, approximately half of the teachers reported specific curriculum and program-related discussions with other principals. Thirty-three percent reported limited or no interaction with their principals on curriculum matters.

Another question asked teachers to describe how they interacted with principals in specific circumstances. The results of that question are presented in Exhibit 2-9. One noteworthy result is the opinion of more than 40 percent of responding teachers that supervision is useful, compared to 27 percent

	VERY USEFUL			NOT USEFUL	
	1	2	3	4	5
Supervision	18%	24%	31%	18%	9%
Staff Meetings	19%	32%	27%	15%	7%
Resource Support	27%	29%	28%	11%	5%

EXHIBIT 2-9

TEACHERS' RATINGS OF DIFFERENT TYPES
OF INTERACTION WITH THEIR PRINCIPALS

rating it as not useful. Half of the teachers also viewed staff meetings as useful, while one teacher in five judged them to be not useful. When asked if they receive guidance and direction on curriculum matters, 58 percent of teachers answered yes. In a follow-up question asking how this guidance was given, 38 percent who answered yes indicated "by means of the principal." When teachers were asked, "How important is it to you for the principal to provide teachers with instruction/curricular direction?" two-thirds of the teachers regarded the principal's role as very or somewhat important.

In order to have a measure of what teachers believe principals are presently doing in the role of instructional leader, a survey question asked how frequently a number of tasks are performed by principals. The results of that survey item are shown in Exhibit 2-10. Some of the responses are quite noteworthy, especially given the large sample (N = 698)--that responded to this item. More than 50 percent of responding teachers said their principals never work with them to improve or expand their teaching skills. Similar percentages said the principal never acts as a resource for demonstrating new methods and materials. Apparently, very few principals are conducting these activities on a weekly basis. Only two categories, observing classrooms and participating in pupil discipline, approached 10 percent. These data are consistent with stateside reports which indicate that administrative demands oftentimes leave inadequate time for principals to exercise their role as instructional supervisor,

	AT LEAST ONCE A WEEK	AT LEAST ONCE A MONTH	AT LEAST TWICE A YEAR	AT LEAST ONCE A YEAR	NEVER
Observing Classrooms	9%	24%	41%	18%	9%
Working with You to Improve/ Expand Your Teaching Skills	4%	11%	19%	16%	50%
Acting As a Resource for Demonstrating and/or Informing You about:					
(1) New Methods	3%	12%	19%	18%	48%
(2) New Materials	4%	12%	22%	18%	44%
Participating in Meetings in Which the Focus Is on:					
(1) Management of Instructional Program	3%	20%	20%	25%	32%
(2) School-Level Curriculum Development/ Review	2%	21%	28%	24%	25%
(3) Classroom Management/Pupil Discipline	9%	19%	21%	22%	29%

EXHIBIT 2-10

HOW FREQUENTLY PRINCIPALS
ENGAGE IN VARIOUS ACTIVITIES
ACCORDING TO TEACHERS

and point to a need for business management support at the school level.

Principals also were asked to indicate the time they spend on four kinds of activities and, further, to indicate if they thought the time spent was about right, too little, or too much. Results are shown in Exhibit 2-11. (In completing the form, principals were told activities did not have to sum to 100 percent.) In the category of particular interest in this section, instructional leadership, only 7 percent of principals said they spend more than 50 percent of their time in this role, though nearly 70 percent said they would like to spend more time. Apparently, the area from which they would most like to gain that additional time is logistics--45 percent said they spend too much time in that activity.

CURRICULUM DEVELOPMENT PROCESS

The curriculum development process adopted by DoDDS has evolved to a highly technical state in which there is systematic involvement of all levels of teachers and administrators. The current five-year cycle posits different subjects at different points in the cycle, so that at any time considerable curricular activity is occurring; but the particular kind of activity and its locus in the administrative/teaching structure is a function of the subject and its schedule on the five-year plan.

The Comprehensive Study sought to examine the curriculum development process from two perspectives: the kinds of involve-

	TIME SPENT CURRENTLY				SHOULD SPEND LESS TIME	JUST ABOUT RIGHT	SHOULD SPEND MORE TIME
	1-10%	11-25%	26-50%	+50%			
Budget/Fiscal Activities	68%	24%	5%	3%	26%	69%	4%
Logistics	40%	44%	14%	2%	45%	53%	3%
Public Relations	22%	47%	24%	7%	18%	74%	9%
Curriculum and Instructional Leadership	15%	47%	31%	7%	1%	30%	69%
Educational Management/ Organization	10%	45%	30%	15%	14%	46%	40%

EXHIBIT 2-11

PRINCIPALS' ESTIMATES OF TIME SPENT AND
OPINIONS ABOUT ITS APPROPRIATENESS

ment by teachers and administrators and the usefulness of the five-year cycle.

Teachers were surveyed to identify the frequency with which teachers are involved with different activities in the five-year curriculum development process. These activities include establishing goals and objectives, selecting textbooks, developing curriculum guides and materials, piloting textbooks or materials, and evaluation. Participation in inservice activities was queried separately in another portion of the questionnaire. Approximately 57 percent reported involvement in these activities related to the DoDDS curriculum development process. A follow-up question asked teachers to identify the kinds of school-level curricular decision making activities in which they are involved. Approximately 71 percent reported participation in such activities. Among those categories in which teachers indicated substrantial school level involvement were (1) determining goals and objectives for programs and courses, 49 percent; and (2) selecting instructional materials and texts, 55 percent. The most frequent involvement for teachers in the Five-Year Curriculum Development Plan was participation on a textbook review committee; 35 percent of the teachers surveyed said they had involvement in that activity. Twenty-eight percent reported having piloted textbooks and/or instructional materials. Exhibits 2-12 and 2-13, respectively, show survey results for teachers' involvement in the Five-Year Curriculum Development Plan and school-level curricular decisions.

	PERCENT RESPONDING*
Regional Committees to Review and Establish Goals and Objectives	19%
Textbook Review and Adoptive Committees	35%
Curriculum Evaluation Studies	22%
DoDDS Task Force Meetings in Washington	**
Regional Task Force Meetings to Develop Curriculum Guides and Materials	12%
Piloting Textbooks and/or Instructional Materials	28%
Non-response Plus None of the Above	43%

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*As teachers could circle more than one category, percents do not total 100 percent.

**Less than 0.5 percent.

EXHIBIT 2-12

TEACHERS' INVOLVEMENT IN ACTIVITIES RELATED TO THE DoDDS FIVE-YEAR CURRICULUM DEVELOPMENT PROCESS

	PERCENT RESPONDING
Determining Goals and Objectives for Programs and Courses	49%
Selecting Instructional Materials and Texts for Use in Classrooms	55%
Planning for Changes in the School's Curricular Offerings	28%
Planning Instructional Innovations	29%
Coordinating the Articulation of Curricula Across Grade Levels/Departments	23%
Non-response Plus None of the Above	28%

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*As teachers could respond to more than one category, percents do not total 100 percent.

EXHIBIT 2-13

TEACHERS' INVOLVEMENT IN SCHOOL-LEVEL CURRICULAR DECISION MAKING

Regarding the usefulness of curriculum guides provided by DoDDS, teachers were asked to rate six potential uses of the guides. According to the survey, the curriculum guides are used most frequently to determine course goals--70 percent of the teachers used them extensively or made some use of them. They are used somewhat less frequently in writing lesson plans. Forty percent said they used guides for that purpose (see Exhibit 2-14). In fact, DoDDS's published guides are primarily documents providing program objectives rather than instructional objectives and would therefore not be used for daily instructional planning.

Principals were asked a similar question (see Exhibit 2-15), except they were requested to indicate their school's use of curricular guides. Interestingly, principals, more than teachers, believe that curriculum guides are being used extensively. Principals generally (85-90 percent) regarded the curriculum plan as being useful for the specific purposes queried. Exceptions were: "monitoring the instruction of your school" (24 percent found it useful), and "promoting comparability between stateside and DoDDS schools" (17 percent said it was not useful).

An interview question asked principals if the five-year plan had an impact on their schools. Nearly 90 percent said it did have an impact. When asked to indicate what that impact was, two-thirds mentioned receipt of new texts and materials. Two-thirds of responding principals also said that the curriculum plan was an efficient or extremely efficient method of

	USED EXTENSIVELY	SOME USE MADE	USED RARELY	NOT USED
To Determine Course Goals and Objectives	22%	48%	17%	13%
To Select Materials	14%	40%	23%	22%
To Plan Units	12%	42%	24%	22%
To Write Lesson Plans	10%	30%	27%	33%
To Communicate Course Curricula to Parents	10%	36%	26%	28%
To Articulate Curricula Between Grades	9%	40%	23%	28%

EXHIBIT 2-14

TEACHERS' USE OF DoDDS' CURRICULUM GUIDES FOR SIX PURPOSES

	VERY USEFUL	MODERATELY USEFUL	USEFUL	NOT USEFUL
Bringing about Curricular Change in the School System	31%	38%	26%	5%
Promoting Uniformity of Instruction in Your School	26%	42%	25%	8%
Bringing about Curricular Change in Your School	23%	34%	32%	11%
Monitoring the Instruction of Your School	18%	27%	32%	24%
Promoting Comparability between Stateside and DoDDS	15%	35%	33%	17%
Promoting Compatibility in Curriculum Among DoDDS Schools	42%	25%	25%	9%
Evaluating the Education Programs in DoDDS	21%	32%	35%	12%

EXHIBIT 2-15

PRINCIPALS' RATINGS OF USEFULNESS OF DoDDS' FIVE-YEAR CURRICULUM PROCESS encouraging uniformity of instruction among schools and regions. This reflects success in DoDDS' effort to have a standardized curriculum throughout DoDDS so that students transferring from one region to another will have minimal requirements for adjustment to the new DoDDS school.

In the course of implementing a comprehensive curriculum development plan on the scale of the DoDDS five-year plan, certain "costs" are incurred in terms of programmatic and management alternatives that are foregone. Principals were asked if they felt the five-year plan was an "efficient use of the school system's fiscal and personnel resources." Roughly three-quarters agreed or agreed strongly that it was. When asked if the five-year plan "limited your flexibility to meet the instructional needs" of your students, only 8 percent said the requirements of the plan were too restrictive.

SUMMARY

Among the most important elements of quality of education is the collective perception of quality held by the principal actors in the education enterprise, i.e., parents, students, teachers, and administrators. According to these groups, a DoDDS education is a resounding success. When Comprehensive Study data were compared to Gallup Poll data, we found that DoDDS parents were more pleased with the general performance of their DoDDS schools than are stateside parents. Nevertheless, there are considerable differences in parents' and students' perceptions of quality of education when data are disaggregated by region.

How well prepared are students academically when they arrived at their DoDDS schools? Two-thirds or more of students in grades 5 through 12 felt that their DoDDS schools were ahead or at about the same level as their stateside schools. Notable exceptions were music and mathematics. Teachers also (nearly 90 percent) indicated that stateside students fit easily into the DoDDS program.

Another focus of this chapter is instructional materials. Students, teachers, and principals again gave very high marks to the quality of instructional materials. Overall, only 13 percent of teachers thought that the availability of materials was very unsatisfactory. When subject area teachers and their principals were asked to rate adequacy of materials by subject, there were some clear winners and losers. Among those receiving the strongest approval were reading and mathematics. Subjects more often rated as having very inadequate instructional materials were computer education, vocational education, physical education, career education, and subjects for special needs students. However, several of these areas are more recently established and have not accumulated materials over time as other subject areas have.

The tasks of managing the instructional requirements of 269 DoDDS schools in 20 foreign countries is a complex one. With a centralized curriculum, regional coordinators play--or are thought to play--a large role in providing guidance and resources to subject area teachers. Yet, when asked how satisfied teachers were with their coordinators a surprisingly large number--75 percent in some regions--responded that they were dissatisfied or very dissatisfied. In fact, the perceived value of services of regional coordinators appears to be highly correlated with how geographically dispersed the schools are in each region. Thus, travel time and travel budgets appear to be contributing factors to these assessments of services provided.

School level supervision and guidance also yield surprising results. One in four teachers are supervised once a year or not at all. Ongoing supervision (i.e., classroom observation or direct assistance at least once a month) is reported by approximately one-third of the teachers. Over 50 percent of teachers interviewed said they received no guidance or direction on curriculum matters.

These findings lead us to inquire about the role of the principal as instructional leader. In a survey of nearly 700 teachers, one-third did not regard the role of principal as instructional leader as particularly important. Indeed, half of the teachers surveyed said their principals never worked with them to expand their teaching skills. When principals were asked about their role as instructional leader, about half said they spend from 10 to 50 percent of their time in that role, but two-thirds would like to spend more time and, further, they would give up logistical and budget/fiscal activities to do so.

The roles described here for teachers, principals, and regional coordinators in the instructional management process are perhaps more limited than is ideal. A corollary area is curriculum development. Since that process has evolved from a relatively simple guidance document in 1978 into a large and complex procedure, a legitimate concern is the extent to which teachers' and principals' traditional roles in curriculum development have been replaced by the Five-Year Curriculum Development Plan.

While 60 percent of the teachers surveyed reported some degree of engagement in curriculum development, 40 percent did not record an answer to a list of activities that are part of the curriculum development process. Furthermore, between 45 and 60 percent of the teachers said they never used or rarely used the curriculum guides for six kinds of activities (i.e., to communicate curricula to parents, to plan units, to write lesson plans, etc.). Principals, on the other hand, believed the guides are used extensively.

A number of conclusions can be drawn:

- Satisfaction with the quality of education in DoDDS, while very high, varies across regions far more than expected in a system that is procedurally and administratively uniform. Furthermore, that satisfaction does not appear to be a function of geographical dispersion within regions--the two most satisfied regions being Panama and the Pacific.
- Both students and teachers agree that DoDDS is at about the same educational level or ahead of stateside schools.
- Teachers' and administrators' satisfaction with subject area materials is very high for the basics, but lower for more recently developed curriculum areas.

- Teacher supervision by principals is far lower than ideal. Similarly, the use made of regional coordinators by teachers is lower than expected. There appears to be a need for resource managers and curriculum specialists who are more readily accessible to the schools they serve.

- The Five-Year Curriculum Development Plan should be continued. The review cycle, however, might be adjusted to reflect differences in the stability of subject matter and instructional content across curriculum areas (discussed more fully in chapter 5).

CHAPTER 3

SPECIAL SERVICES AND PROGRAMS

In July 1979, Congress enacted Public Law 95-561, which required that the overseas dependents schools establish and operate programs designed to meet the needs of all students:

> Sec. 1402 (a) The Secretary of Defense shall establish and operate a program (hereinafter in this title referred to as the "defense dependents' education system") to provide a free public education through secondary school for dependents in overseas areas.
>
> (b) (1) The Secretary shall ensure that individuals eligible to receive a free public education under subsection (a) receive an education of high quality.
>
> (2) In establishing the defense dependents' education system under subsection (a), the Secretary shall provide programs designed to meet the special needs of
>
> (A) the handicapped
> (B) individuals in need of compensatory education
> (C) individuals with an interest in vocational education
> (D) gifted and talented individuals, and
> (E) individuals of limited English-speaking ability
>
> (3) The Secretary shall provide a developmental preschool program to individuals eligible to receive a free public education under subsection (a) who are of preschool age if a preschool age program is not otherwise available for such individuals and if funds for such a program are available.
>
> -P. L. 95-561
> Title XIV
> Section 1402 (emphasis added)

This chapter addresses (1) the overriding issues that affect meeting these special needs; (2) an in-depth look at Compensatory

Education, Talented and Gifted [TAG] programs, and programs for individuals with Limited English-Speaking [LES] ability; (3) vocational education; and (4) the role of Pupil Personnel Services [PPS] in the operation of all of these programs. Special education for the handicapped will be discussed separately in the next chapter.

ISSUES

Certain questions can be asked of all programs designed to meet the special needs of children: Are all students with special needs being identified? Do all identified students have access to appropriate special programming and specially trained staff? Do fully developed programs exist for each special needs category? Do the regular classroom teachers of students with English as a Second Language [ESL], Compensatory Education, and Talented and Gifted needs have the necessary training and access to specialist consultation services to appropriately deal with the special needs students in their classrooms? What priorities have been set within and between programs? Who sets these priorities? What unique situations within DoDDs impact on meeting the needs of these populations?

Needs Identification

Interviews with regional coordinators indicate that there is wide variation in services available to Compensatory Education, ESL, and TAG students, both within and between regions. At the time of our data collection in the fall of 1982, there was no systemwide requirement for an annual census of special needs students. Some regions did not have accurate counts of specialist staff and where they are located. Current development of a management information system may serve to correct this situation.

Projections (based on comparative stateside populations) of the numbers of Compensatory Education, LES, and TAG students show a possible discrepancy between present staffing levels and likely current needs:

- An estimate of 6 percent of DoDDS students who need ESL education is considered reasonable (a 1980 survey showed that the Pacific Region, known to be high on LES students, had 8 percent of its students with Limited English-Speaking ability). For the 1982-83 school year that would be 8,200 students. The system presently has 87.5 educators qualified and teaching as ESL teachers.
- Four percent of DoDDS students are estimated to be Talented and Gifted (5,500). In 1981-82, 2,452 students were identified. Presently, 57 educators with training in TAG are employed in the system.
- It is estimated that 17 percent of DoDDS students (23,400) are in need of Compensatory Education. DoDDS has identified 9,713 students and presently serves 4,653 with 46 teachers and 89 professionals.
- Provision has been made for an increase of 414 special services staff for the 1983-84 school year.

Compensatory Education student needs have been partially met through use of reading specialists and special education staff. Germany-North has even made Compensatory Education students officially part of the special education process, calling them "Priority II" students (see DSN 2519.2). Because of this global definition of special education, some school staff now refer to the "real" special education students as the "IEPs."

This inconsistency in terminology leads to inconsistency in service across regions.

Access to Programs and Staff

The number of schools having access to specialists has increased markedly over the past three years, as shown by Exhibit 3-1. To qualify as a TAG specialist, educators need to complete the DoDDS TAG Summer Institute or 18 hours of training in Talented and Gifted education and supervised practicum or fieldwork in this area. To qualify as an ESL specialist, an educator needs six graduate credit hours in the theory and practice of teaching English as a Second Language plus nine semester hours in such courses as applied linguistics, social linguistics, comparative cultures, language development, and social psychology of the bilingual child or completion of the DoDDS ESL inservice. In addition, to qualify as an ESL specialist, an educator must also qualify in one other category. Requirements for Compensatory Education teachers are the same as for regular class teachers.

Regular Class Teachers

Teachers overwhelmingly perceive special programs as having a positive or very positive effect on the overall quality of education in their schools, as shown by Exhibit 3-2.

Eighty-nine percent of teachers interviewed indicated they had children with special needs in their classes. Eighty-two percent of the teachers said that specialists were always or nearly always available when needed. Teachers used specialist services for providing support via direct teaching of individual

	1980-81	1981-82	1982-83
Talented and Gifted	13%	19%	52%
ESL	25%	31%	53%
Remedial Reading (Compensatory Education)	67%	75%	81%

EXHIBIT 3-1

PERCENTAGE OF SCHOOLS WITH SPECIALISTS*

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*Based on principal mail survey

	VERY POSITIVELY AFFECTS QUALITY	POSITIVELY AFFECTS QUALITY	NEGATIVELY AFFECTS QUALITY	VERY NEGATIVELY AFFECTS QUALITY	PROGRAM NOT OFFERED/ NON-RESPONSE
Compensatory Education	15%	46%	3%	1%	36%
Special Education	26%	54%	4%	2%	15%
ESL	20%	50%	3%	1%	25%
TAG	12%	44%	4%	1%	39%

EXHIBIT 3-2

TEACHER PERCEPTION OF SPECIAL PROGRAM IMPACT ON THE QUALITY OF EDUCATION students (34 percent); direct teaching of small groups (17 percent), testing, diagnosis, assessment, and screening (2 percent); and as general resources and consultants (28 percent).

- Fifty-four percent of all regular class teachers interviewed indicated they had problems with special needs students, the most prevalent of which are:
    - disruptive behavior (36 percent)
    - low-class performance (14 percent)
    - time demands on the teacher due to need for individualization (10 percent of teachers indicated this as the most prominant problem)
- The problems most frequently mentioned by teachers are:
    - learning disabled (37 percent)
    - Talented and Gifted (12 percent)
    - ESL (2 percent)
    - visually impaired (2 percent)
- Forty-four percent of responding teachers reported that they were inadequately prepared to deal with special needs students and would like more training (course, inservice). Others mentioned having fewer students (lower pupil/teacher ratio, 11 percent), more and greater variety of materials (14 percent), and having larger classrooms (8 percent). These data are comparable to those reported from surveys of stateside teachers.

Principals see a need for further assistance in inservice training in all areas for teachers. On a scale from one (low need) to five (high need), relative frequencies are provided in Exhibit 3-3.

Priorities

Principals, teachers, specialists, and regional staff agree that special education has the highest priority among programs

	LOW NEED			HIGH NEED		
AREA	1	2	3	4	5	MEAN
TAG	4%	11%	18%	34%	31%	3.7
Special Education	4%	10%	33%	33%	19%	3.5
ESL	9%	22%	25%	27%	15%	3.1
Compensatory Education	8%	11%	26%	32%	20%	3.4

EXHIBIT 3-3

NEED FOR INSERVICE TRAINING FOR TEACHERS for special needs students, followed by Compensatory Education, ESL, and TAG. Nevertheless, close to one-fourth of principals rate Compensatory Education, ESL, or TAG as having the highest priority among special programs in their schools. Of those schools reporting an absence of special programming, 80 percent without ESL programs indicate they need such programming, 66 percent without special education indicate they need special education, 64 percent of those schools without TAG programs indicate a need, and 50 percent of the schools without Compensatory Education indicate there is a need for such programming (Exhibit 3-4).

Principals and specialists differ in their perceptions of what or who has the greatest influence in setting priorities. Principals see priorities being set at the local level, with 32 percent reporting the most influential factor being the numbers of students having various types of special needs and 15 percent citing the influence of teachers. Twenty-nine percent of the principals see the Regional Office as the source of greatest influence in determining program priorities. Fifty-nine percent of the principals report getting input from the community on special programs, most often through parents (23 percent) and advisory committees (20 percent). Specialists see priorities being set at the above-school level: 40 percent cite the influence of the Regional Office, and 27 percent name ODS. Thirty-two percent of the specialists perceive parents as having the greatest influence on setting priorities between programs. Within

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	IS IT AVAILABLE?		IF NO, IS IT NEEDED?	
	YES	NO	YES	NO
Compensatory Education	58%	42%	50%	50%
Special Education	89%	11%	67%	33%
ESL	71%	29%	80%	20%
Talented and Gifted	58%	42%	64%	36%
Vocational Education	22%	78%	17%	83%
Career Education	46%	54%	35%	65%

EXHIBIT 3-4

SCHOOLS OFFERING SPECIAL PROGRAMS
AND NEED FOR ADDITIONAL SPECIAL PROGRAMS

programs 80 percent of the specialists report they themselves set priorities.

ESL was rated by principals as being of slightly above average instructional quality, slightly underemphasized, with adequate curricular offerings. Principals for schools offering kindergarten through grade six reported ESL available at 44 percent of schools, the largest number of programs being available in grade three. ESL instruction was only available at 19 percent of schools having seventh grade, 17 percent of schools having eighth grade, and only 11 percent at the high school level (grades 9 through 12). Eighty-three percent of schools with ESL programs operate them on a resource model. Fifty-two percent of schools have access to ESL diagnostic tests. Supplies and equipment were rated generally adequate, as was the quality of instructional materials. Equipment was rated as current.

Compensatory education was rated by principals as slightly above average in quality of instruction, slightly underemphasized in the curriculum, with adequate curricular offerings. Services are usually provided on a resource/itinerant basis (73 percent of schools).

Uniformity of Program Factors

All three areas have determined broad goals and objectives which are used systemwide (Compensatory Education D.S. Regulation 2090.1, Compensatory Education Guide; Transitional Bilingual Education Program I: The Purpose and Objectives of English as a Second Language, D.S. Manual 2440; Guide for

Talented and Gifted Education/Draft). The Compensatory Education, Talented and Gifted, and ESL programs have detailed program guides in draft form.

Unique Factors

Services vary widely between small and isolated schools and larger school complexes on large installations. Small schools which are geographically isolated from both other DoDDS schools and large military installations provide low incidence situations where service delivery problems are similar to those found in rural areas of the continental United States. For example, in Germany-North there is a small remote school where one aide runs the ESL, Compensatory Education, and Special Education programs. She works under the "supervision" of one itinerant learning disabilities specialist who visits the school one day per month. At another location, 4 schools have 52 ESL students between them. They, like rural stateside schools, are serviced by one itinerant ESL specialist who spends a significant amount of time on the road and who is unable to give direct services daily. These situations present quite a different picture from that of a large school which may have four full-time specialists on staff, with full-time aides on staff, and access to more resources located on base, if necessary. In situations involving small schools with low incidence, and special needs students in geographically isolated areas, regional staff interviews indicate that the normal pupil-to-teacher ratios must be modified to give these students the access to the programs they need. In sum, it is difficult to meet the needs of special students in small schools.

ROLES OF PPS IN SPECIAL PROGRAMS

Pupil Personnel Service encompass a wide variety of staff including guidance counselors, social workers, nurses, psychometrists, psychologists, and educational prescriptionists (who may, depending on the region, be part of special education). They play a vital role in meeting the special needs of children.

Guidance counselors at the high school level often play a primary role on Case Study Committees maintaining records, acting as case managers, making program adjustments, and acting as liaison with parents and teachers. They may do diagnostic tests, as do psychologists and psychometrists. For ESL and Compensatory Education students, making sure programming is appropriate is a primary role. In some regions (e.g., Germany-North) and in some schools, personnel have taken the lead in developing TAG programs. Counselors have traditionally taken the lead in career education and may become deeply involved in vocational education at the high school level. The actual areas of responsibility vary enormously from school to school, but teachers surveyed indicate that jobs at the school level are fairly clearly defined, although at times the lack of clarity poses somewhat of a problem.

CAREER AND VOCATIONAL EDUCATION

Career education is a comprehensive program which encompasses all grade levels of the dependents' schools. Career education seeks to make all students aware of the value of a work-oriented society, to integrate these values into a personal value system, and to implement these values so that work is possible, meaningful, and satisfying. Because it is a comprehensive K-12 program, career education encompasses prevocational education and vocational programs which involve specialized training in occupational skills at the high school level.

DoDDS organizes its vocational programs so that these career purposes can gradually mature. Vocational education in DoDDS is divided for organizational purposes into several "steps." In the Exploration Step (1) career information is provided; (2) attitude-forming instruction is offered in home economics, business, and industrial arts; and (3) cooperative work experience is offered on an elective basis. In the Prevocational Step of its Career Education Program, DoDDS offers skills-oriented instruction on an elective basis in (1) automotive technology, (2) business education, (3) computer technology, (4) cosmetology, (5) electricity/electronics, (6) graphic arts, (7) medical/dental, and (8) photography. In addition, cooperative work experience is offered both to those continuing from the Exploration Step and those electing it for the first time in the Prevocational Step.

Career Awareness receives major emphasis in grades kindergarten through six and is designed to develop an awareness of the personal and social significance of work, the basic skills of learning, social development, cooperative interaction, the nature of social roles, the potentialities and limitations of the environment, and a greater sense of self awareness.

Career Orientation generally occurs in grades seven and eight. This is characterized by the study of occupational clusters across content areas. In art, for example, students might discuss a series of occupations which include furniture designer, commercial artist, civil engineer, and architect. In addition, the process of decision making, life planning, adapting to change, and information gathering for reasoned decisions is infused into the middle school curriculum.

Career Exploration is emphasized in grades 9 and 10. During this transitional period in their lives, students have the opportunity to actively explore work in relation to their own interests and aptitudes. Career Exploration activities include on-site work observation, work experience, hands-on laboratory experience, role playing, and class discussions with special resource persons.

Career Preparation begins in grades 11 and 12, where students become involved in cooperative work experiences, technical, business, or other vocational or preprofessional courses. Students explore careers in greater specificity, and many receive training in entry level or precision skills. This stage requires an intensive guidance and counseling effort to help students with difficult decisions for career preparation. Counselors are instrumental in helping students clarify career objectives and interests, identifying students' aptitudes and relating these to occupational choices, assisting in students' job seeking efforts, providing information about placements and postsecondary opportunities, and making available occupational information including manpower trends and projections.

School size makes a difference as to the types of vocational courses that a high school can provide, and location and relationships with the military and host country can play a crucial role in maintaining an effective supplies and equipment situation. Staff turnover can also be a problem in maintaining a quality program.

Quality of both vocational and career education was rated as average with both curricular areas being slightly underemphasized in the curriculum as a whole. Course offerings are rated as barely adequate to meet student needs. Career education exists in 51 percent of the classes in kindergarten through grade 6, 30 percent of 7th and 8th grade programs, and 17 percent of 9 to 12 programs. Vocational programs are focused in grades 7 to 12, where approximately 20 percent of grades have courses available.

High school principals report a steady growth in the number of high schools which offer vocational courses, although due to the small size of many of the high schools, vocational offerings may be limited:

	1980-81	1981-82	1982-83
Mean FTE Vocational Staff	2.3	2.4	2.8
Range of Staff FTE	0-6	0-6	0-6
Percent of High Schools with Vocational Staff	79%	87%	91%

Sixty-two percent of the principals indicate a moderate to high need to have more career education staff; 55 percent indicate a moderate to high need for more vocational education staff.

Analyses of the NCA evaluation reports for vocational and career education programs in schools evaluated in 1981-82 show a wide variation in the substance and quality of programs and courses offered in career, vocational, and cooperative work experience programs. Factors such as size of school, quality and turnover of personnel, facilities and equipment currency and maintenance, and relationships with both military and host country institutions all affect what is being offered in the vocational area. Since vocational education is an area that relies heavily on materials, supplies, equipment, and suitable facilities, it is greatly affected by the types of problems discussed in later sections on logistics, supplies, etc. NCA reports repeatedly refer to problems in maintenance and equipment repair. In some schools scheduling difficulties limit accessibility to and quality of individual programs.

Several of the NCA reports expressly refer to a problem with having vocational programs which are relevant to the population of students at any given high school. The mixture of students who are college bound or will be working or entering job training after high school varies considerably from high school to high school. In response to this need for relevant programs, the suggestion was made by the Regional Director of Germany-North that DoDDS establish a performing arts vocational high school in Germany to meet the needs of the many highly talented students there.

On the parent survey, 249 of the 1,206 responding parents graded the quality of the vocational training their high schools offered. The average grade was C+:

Percent of Parents	Quality Grade
15%	A
33%	B
34%	C
12%	D
7%	F

High schools in Germany-South, Atlantic, and Panama were given high grades (A or B) by 50 percent or more of the parents in those regions. High schools in Germany-North and the Mediterranean were given high ratings by 47 percent and 46 percent of their parents, respectively. The Pacific Region was notable for having only 23 percent of its parents highly satisfied with vocational training. Those regions which had higher unsatisfactory ratings (D and F) included the Pacific (23 percent), Atlantic (22 percent), Germany-South (19 percent), Germany-North (18 percent), and Mediterranean (15 percent). Parents in Panama gave no grades below C.

Sixty percent of parents thought there was not enough emphasis in DoDDS on preparing students who do not go to college for a job or career after graduation from high school.

RECOMMENDATIONS: SPECIAL SERVICES AND PROGRAMS

Although DoDDS has established programs and trained personnel for meeting needs of students who require Compensatory Education, ESL education, and Talented and Gifted programming, the availability and quality of services available vary both between and within regions. To assure that appropriate programs are available throughout DoDDS it is recommended that:

- Compensatory Education, ESL, and TAG programs be fully funded and staffed so that DoDDS students with these special needs have the same opportunity for programming which they have stateside.
- An annual census/needs assessment should be done by October 1 of each school year to identify the current population with special needs, and appropriate staffing adjustments should be made.
- Screening and assessment procedures and techniques should be uniform throughout DoDDS.
- Draft program guides in Compensatory Education, ESL, and TAG should be finalized and distributed to all regions for use in program development.
- Qualification and certification standards should be developed for Compensatory Education teachers.
- When appropriate programs are impossible to implement in specific schools due to low incidence, geographic isolation, etc., parents should be informed in advance of this situation and alternatives made available.

- The problems encountered by small and isolated schools as they affect these students, as well as vocational programs, should be addressed directly:
  - Regions should provide a small schools administrator who is of supervisory/deputy director rank to address the needs of these schools.
  - Specialist assignments, pupil/teacher ratios, and other staffing criteria should be reassessed in light of the special problems faced by these schools.
- If regional coordinators are expected to function as in-house technical consultants for specialists and regular classroom teachers of students with special needs, they should have both the professional credentials and experience to be respected, useful to, and used by school-level staffs.
- Staff responsible for career education programs should make sure that information available to students is current and of sufficiently broad scope to be considered relevant and valuable to students and parents.
- Vocational education programs have not substantively changed since the assessment done by the U.S. Department of Education in 1981, and their recommendations are still pertinent:
  - Program offerings should be expanded to be more responsive to the needs of particular age groups and exceptional students and to correspond with the most comprehensive and up-to-date employment opportunities.
  - Program problems created by difficulties in supply, logistics, management information systems, etc., should be remedied according to the recommendations in those sections of this report.
  - Specific recommendations for updating and expanding vocational offerings such as the one proposed for the Performing Arts High School should be explored in depth.

CHAPTER 4

SPECIAL EDUCATION

On December 23, 1981, the Federal Register published the "final rule" implementing the Education for All Handicapped Children Act of 1975 and the Defense Dependents Education Act of 1978. Meeting the needs of handicapped children within the unique educational structure of the DoDDS system now becomes a challenge for DoDDS personnel, not in terms of what has been but in terms of what needs to be done to meet the requirements of the implementing regulations. (Regulations somewhat parallel to PL 94-142 regulations were issued on May 25, 1979; DoD Instruction 1342.12, the most recent issuance, is significantly more comprehensive procedurally.)

As appraisal is made of DoDDS special education programs, it should be remembered that initial regulations regarding the implementation of PL 94-142 came two years later in DoDDS than in stateside public schools, and DoDDS Instruction 1342.12 has only been operational for 18 months. During the initial phase of implementation in stateside schools extreme effort was exerted to achieve compliance with the legislation; during the initial phase of implementation DoDDS also centered its effort on elimination of compliance deficits. To establish overseas all services required for individually appropriate education of handicapped pupils is a requirement which DoDDS is in the process of achieving.

As one examines the regulations and the variety of programs listed school by school, certain factors become apparent at the outset:

- DoDDS is a unique system in that disproportionately few severely handicapped children make up the student population in need of service.
- DoDDS has established a service delivery model which is noncategorical and developmentally based.
- A continuum of services may not exist in terms of least restrictive alternative placement. Some DoDDS schools are small and services are brought into being when need exists.
- Evaluation of the special education program must center on substantive and procedural variables related to legal mandates (compliance) rather than student achievement variables. If the system functions effectively in the broader substantive requirements of the law then there is greater likelihood of adequate service delivery to the handicapped child. A review of evaluation studies stateside elaborates upon this view.

CURRENT PRACTICES

On September 30, 1981, GAO released a study titled, "Disparities Still Exist in Who Gets Special Education." It is against such a backdrop that the DoDDS system should be evaluated. Excerpts from that report follow.

The number of children receiving special education services averages about 8.5 percent of the school-age population, according to state counts. DoDDS is currently serving 10.4 percent of its population. Only one state (Utah) has a higher percentage of identified handicapped children.

DoDDS stated a lower student count in school year 1981-82 than in 1980-81. The rationale given is that, in fact, expanded diagnostic capability provides more appropriate identification of specific areas of exceptionality. A problem that still exists, however, is a definitional frame of reference that on occasion goes beyond the legal directive of 1342.12. A more critical area may perhaps be the level of staff assigned to serve the handicapped population in DoDDS. A staffing increase of approximately 25 percent for the 1982-83 school year has brought the student/professional staff ratio to 16 to 1 (a figure that compares favorably to many stateside systems). However, interviews with special education teachers generated a mean enrollment of 24 and a median of 19. A more critical set of variables may in fact be how professionals in the system view these ratios. Seventy-five percent of the special education teachers interviewed find the available resources and trained personnel available to do diagnostic work sufficient. In fact, approximately 700 teachers are projected to be available for the 1983-84 school year.

DoDDS specialists were asked to look at program specific needs in components of their programs. Levels of concern are illustrated in Exhibit 4-1. Eighty-nine percent of principals and 78 percent of special education teachers interviewed reported that the scope of programs available matched with student need. Seventy-eight percent of the principals surveyed reported that there are few or no special education children in regular classrooms who should be assigned to self-contained classrooms. Case study observations confirmed the availability of programs for

	ALL SPECIALISTS CONSIDER A PROBLEM	SPECIAL EDUCATION CONSIDERS A PROBLEM
Student Identification	10%	9%
Diagnosis	9%	12%
Staffing	28%	23%
Material/Equipment	29%	27%
Staff Development	28%	38%
Program Implementation	12%	12%
Program Evaluation	6%	7%
Coordination of Services	9%	9%

EXHIBIT 4-1

SPECIAL EDUCATION PROGRAM NEEDS

mild to moderate special needs children. As a child's need increases, however, the availability of programs for low incidence groups is reduced. There are an impressive array of resource programs for handicapped children, but concern arises in the areas of trainable mentally retarded [TMR] and seriously emotionally disturbed [ED].

The data in Exhibit 4-2 indicate that in the TMR area, building administrators were misidentifying children. This view was reinforced in one region where learning disabled children were perceived by staff or administrators to be Compensatory Education rather than "special education" children. The data on ED children are particularly critical in that more than 50 percent of the identified children are being serviced by part-time programs, with few, if any, related services. This fact was reinforced by observations of special education children in three regions as part of case studies in local schools. The provision of medical and medically related services is projected to increase for the 1983-84 school year.

The number of resource programs emphasizes the need for close cooperation between regular classroom and special education teachers. Seventeen percent of principals surveyed described their regular staff as prepared to meet the needs of handicapped children, while 64 percent thought their teachers needed additional skills, and 19 percent thought their teachers were not prepared. No major differences occurred across regions. The preparation of regular teachers is a critical variable in a system that relies so heavily on resource and itinerant services.

	SELF-CONTAINED ROOMS	RESOURCE ROOMS	INTEGRATED/ SPECIALIST	INTEGRATED/NO SPECIALIST
Learning Disabled	3%	89%	2%	4%
Educable Mentally Retarded	18%	68%	3%	5%
Trainable Mentally Retarded	46%	39%	8%	4%
Speech	-	74%	21%	3%
Emotionally Disturbed	15%	54%	20%	7%

EXHIBIT 4-2

PRINCIPALS' DELINEATION OF PERCENT OF STUDENTS SERVED IN EACH PROGRAM TYPE

It should be noted that there is also a continuing stateside need to train regular class teachers to meet the needs of handicapped students assigned to them.

Sixty-five percent of principals surveyed rated the quality of instruction as good or very good in special education. Case study observation tends to support this finding. Although personnel files were not available in the regions, qualifications of staff were quite impressive to case study observers. Special education expertise at the regional level varied more than at the local level. This variability in training experience, availability, and expertise at the regional level had a direct impact on morale and program implementation at the local school level. The Educational Service Center construct to be discussed below can to some degree integrate the impact of regional personnel transition and variable expertise.

Program implementation at the local school level was monitored by the case study team by random selection of special education children, direct observation (35 to 45 minutes) of their classrooms, and reviewing of IEPs and other documentation. These reviews gave us both a substantive and a procedural data base to work from. In addition, all special education classrooms were observed in each quality of education case study and, where possible, all special education teachers were interviewed individually.

Seven study standards were utilized to measure program implementation. These standards were drawn from stateside third-party evaluation studies and modified by the project team. The following is a summary of findings in relation to each of these standards.

Study Standard 1: Students' special education needs are assessed fully prior to placement in a special education program.

It appears that students' special educational needs in educational, cognitive, emotional, and physical areas are assessed by DoDDS professional staff and that, to some degree, multiple formal and informal methods are used.

In the following areas assessment practice appears not to conform completely to DoDDS procedures:

- Approximately one-third of the assessment data encountered were either outdated (academic achievement more than two years old) or not appropriate for the child (non-English speaking). A three-year evaluation is required legally but academic achievement data should be reasonably current.
- Test results were variably explained to parents. Generally they attended placement meetings, but direct observation of approximately 10 of these meetings revealed highly formalized procedures and heavy reliance upon test scores from standardized tests. Although parental involvement occurred it was limited.

Study Standard 2: An initial placement committee operates to make a considered placement decision for each student.

For the most part, membership of the case study committees was found to be consistent with DoDDS procedures (80 percent). Case study committee discussions were quite variable. All case study committee meetings observed involved eligibility, placement, and IEP discussions. Strengths were noted in the areas of provision of transportation (when applicable) and parents' due process rights. Weaknesses centered around discussion of the following topics:

- Range of placement
- Very general discussions of goals and objectives
- Mainstreaming or relationship to the regular education program, discussed in only 12 percent of document reviews of randomly selected cases, and not discussed in the 8 of 10 case study committee observations

Study Standard 3: The placement decision is seen to be appropriate for each student.

Factors of space or program availability inappropriately dominated in making placement decisions, particularly with emotionally disturbed children. The limited number of appropriate programs in this area causes some placement difficulties, particularly in Germany-South.

The lack of a placement option in certain settings does not allow for consideration of such issues as the influences of peer group or degree of handicap, both critical to the determination of an appropriate education. Thus, special education programs in smaller schools, of necessity, cover a broad range of handicaps in terms of type and level.

In approximately two-thirds of the randomly selected cases, the critical match of the program and the child, essential to an appropriate education, were well aligned; in one-third they were not. Issues such as level of service (number of hours) appeared to be dictated as much by needs of regular classroom teachers as needs of handicapped students. This point was made by special education professionals and case study observations in four separate regions. Problems also arose in the match of student learning styles with instructional programs. Use of adapted or branched materials also was limited in case study observations. The tendency of the DoDDS system to emphasize packaged instructional programs has, to some degree, been replicated in special education programs.

Study Standard 4: An IEP is developed and approved for each student prior to the initiation of special education services.

From the randomly selected reviews of IEPs conducted in November of 1982 the following percentages were obtained:

	Yes
Student Having IEP	71%
IEP Developed Prior to Program Implementation	57%
IEP Complete	71%
IEP Approved by Parents	86%

No special education program was reviewed for students who had received services for less than six months. These figures are somewhat below frequencies found in stateside school systems. DoDDS states that these IEPs were completed later in the school year. Although mandates for such requirements have come later (approximately two years) than stateside systems, these figures should be monitored carefully for increasing compliance.

Study Standard 5: Case management, case documentation, and procedure management operations exist to ensure that students participate in an appropriate and effective initial placement process.

Of the randomly selected sample reviews, the following percentages were obtained:

Presence of Case Manager	43%
Case Management Responsibilities Clear	43%
Student Cases Adequately Documented	71%
Appropriateness of Initial Placement Reviewed	71%

The study found inconsistent procedures with regard to case management, case documentation, and procedures management; however, there is no DoD requirement at the present time for the implementation of this standard.

Study Standard 6: The student's IEP is implemented fully.

Strengths:

- The student receives special education services listed on the IEP.
- The student receives each related service listed on the IEP (a caution here, in that related services may not be listed due to lack of availability).
- Materials, equipment, and accessible facilities seen as necessary to program delivery must be used.

Weaknesses:

- Sufficient numbers of qualified staff must be available to the students in order to comply with any specified staff-student ratios and recommended frequency and duration of services. Specific issues identified were:
    - Significant overload in smaller schools, particularly in Germany-South.
    - Lack of program options for seriously emotionally disturbed.

  - Use of aides rather than professionals for program delivery; however, aides are paraprofessionals who carry out plans prepared by a certified teacher.
  - "Priority II" or Compensatory Education pupils used to fill special education program quotas in areas of underidentification cause some confusion in the criteria for service.
- Peer group compatibility
  - Kindergarten through eighth grade were served in one classroom where there were not sufficient students for two self-contained classrooms.
  - There was a lack of a peer group for low-incidence populations; however, achievement of peer group for low-incidence handicapped pupils is difficult in small schools. Other alternatives such as clustering or private placement should be seriously considered.
  - No coordination existed among programs in large schools with multiple resources.
  - In 40 percent of the case study observations, student groupings in resource programs were based on regular classroom teacher schedules rather than child need. The problem of observing regular class schedules yet providing resource room sessions is also common in stateside schools, but the frequency of this observation causes some concerns.
- Sufficient access to regular classroom settings
  - In only one site was coordination between regular and special programs observed. In many settings, coordination was not expected.
  - Program overcrowding in resource programs was precipitated by this lack of communication. In some cases students were referred for all academic activities rather than for a specific area.
  - Program implementation was highly variable. Lack of general supervision or even written communication by special education supervisory personnel was noted in four of six regions. Without guidance or with "mixed" messages, programs tend to be highly individualistic procedurally. One would expect programs to differ in substance, but process differences are a distinct disadvantage.

Study Standard 7: Each student makes progress as a result of service delivery.

Due in part to the transitory assignments of DoDDS students but also because of the lack of standardized achievement data from year to year, over 50 percent of the cases reviewed did not have comparable data across years upon which to judge progress. Of the remaining cases, 75 percent showed student progress, and in 1 case an IEP was modified to guide program delivery.

PROGRAM IMPLEMENTATION/RELATED SERVICES

An issue raised in initial conversation with ODS personnel was the extent to which ancillary resources were available to support educational programs. Twenty-seven of 39 principals interviewed (69 percent) arranged for related services with military medical personnel directly. However, 17 of the 39 principals interviewed (44 percent) thought that no additional related service was needed for their special education students. In addition, 82 percent of responding principals stated that they have used regional coordinators to access related services, while 30 percent of special education teachers stated that they arranged for related services themselves. The principal survey asked administrators to respond specifically to the current availability of related services listed in 1342.12. These services were reported available as follows:

Occupational Therapy	37%
Physical Therapy	52%

Social Work	58%
Parent Training	66%

All other related services were available at a 75 percent level or above. Problems also seem to arise in the securing of available services. Thirty-seven percent of principals surveyed report problems in securing related services. Of those principals reporting difficulties, 64 percent stated the services were unavailable, and an additional 10 percent stated that students cannot get to the related service, although on paper it is available. When students are served, 73 percent of principals rated the quality of the service as high or very high.

Recent developments within the military medical community may impact upon related service availability in the coming year. The Army has identified 86 officers and enlisted medical personnel to be a part of the 125 medical providers scheduled for Europe in the Army's budget for the 1983-84 school year. The first team of 36 will arrive in Germany during the summer of 1983. Policies are being developed which delineate access for these services when they become available; currently tremendous variability occurs in method of access. A related topic deals with linkages with the military community to get necessary support for handicapped children. Of special education teachers interviewed, 67 percent perceive a positive linkage between the school and military medical personnel, military service providers, and regional special education coordinators; however, only 27 percent perceive that linkage as regular and systematic. The lack of related services in certain critical areas and the difficulty in accessing these services raise serious concerns about serving low-incidence populations where these needs become more critical. Again, the system for provision of medical and medically related services currently in its initial stages of implementation is designed to address these needs.

Program Access

Questions of program access centered around three issues: (1) accessibility to appropriate program, (2) accessibility to placement within the least restrictive environment, and (3) accessibility to physical facilities. In the first two areas, DoDDS seems to be doing an adequate job. Questions arise related to limitations of individual student program delivery, but sufficient human resources are available to do the job.

When exposed to the least restrictive environment provision of 1342.12, 64 percent of responding principals said they would not have difficulty in implementing the law. Of the one-third of interviewed principals who said there would be a difficulty, 83 percent felt the physical plant itself would present the difficulty.

Sixty-four percent of principals interviewed stated that some degree of structural modification had been made to facilitate integration. In addition, specific modifications are included in future construction budgets. At the present time, access to program does not appear to be a major concern. Case study observations show that it is the match of student needs to program implementation that is critical.

As to parental access, 80 percent of the special education teachers interviewed stated that parents were involved in the process of providing services to handicapped children. However, 75 percent of the special education teachers interviewed reported no existing overseas parent advocacy groups or parent organizations serving handicapped children, and of the 25 percent who reported parent advocacy groups, only 2 teachers saw them as having an impact on service delivery. To this point, limited activity has occurred in relation to formal due process regarding special education identification or placement. Ninety-one percent of surveyed principals reported that due process/hearing procedures were in place, and 12 percent reported that there had been, or is presently, a due process hearing pending in the placement of a handicapped child in their schools. Case study observations revealed a significant number of additional issues that may arise in the near future relative to due process. With 1342.12 in place a little over a year, the impact of this directive is just beginning to be felt.

SPECIAL EDUCATION INSERVICE

Sixty percent of the special education teachers interviewed received inservice training for program implementation within DoDDS. They received the following amount of training:

6 or more days	5%
2 to 5 days	48%

1 day	14%
1 to 3 hours	11%
Less than 1 hour	14%

Topics reported as part of the training were the following:

	Percentage Of Participants
Evaluation	31%
IEP Development	31%
Identification	28%
Placement and LRE	22%
Procedural Safeguarding	16%
General Special Education	9%
Education Programming	9%
Behavior Management	6%
Case Study Committee	3%

On the basis of principal reports, classroom teachers in 95 percent of their buildings had received special education inservice training. The sources of that training were:

School-Based Special Education Staff	79%
Regionally Based Coordinator	60%
Outside Consultants	60%
Related Service Staff	51%
Washington-Based Coordinators	11%

Attitudes toward Special Programs

In general, special education programs were perceived positively. Eighty-seven percent of teachers interviewed felt special education has had a positive impact on their schools. The relative frequencies for special population programs are:

	Positive Perception	Program Not Offered
Special Education	87%	7%
ESL	78%	9%
Compensatory Education	60%	20%

Ninety-four percent of special education teachers interviewed found regular teachers to be supportive of their programs. Although rough spots were encountered during case study visits, the overall data base shows overwhelming support for the additional services in this area.

Fifty-three percent of teachers interviewed, 56 percent of specialists, 61 percent of the special education teachers, and 64 percent of principals surveyed perceived special education to have the greatest priority of all special programs. Sixty-one percent found instruction to be of high quality, and 64 percent considered curricular offerings to be adequate or very adequate, while 28 percent of the principals felt special education was overemphasized. Seventy-nine percent of interviewed principals and 83 percent of principals surveyed said there was sufficient clarity in the special education teacher's role function.

Specialists were asked to delineate the impact of the military on the placement of families with special needs children. Views varied widely on this issue, as the following percentages show:

Military Matches Special Needs with School	38%
Don't Know	14%
No Effect	14%
Family Sent Even If No Service Available	12%
Don't Send Them	9%
Other	12%

SPECIAL EDUCATION TEACHER PROFILE

For the 35 special educators interviewed worldwide, the following demographic data were gathered:

	Mean
Total Years Experience in Teaching	12
Total Years in DoDDS	5
Total Years in Region	4
Consecutive Years in School	2

Twenty of the 35 identified themselves as learning disabilities/development teachers, and 23 identified their primary role as resource rather than self-contained classroom. Two-thirds of the teachers were hired stateside, and 66 percent had master's degrees or above; thus, a larger percent of DoDDS special educators have graduate training than do their stateside counterparts.

The following responses were given in relationship to job function:

- Types of activities performed with regular education teachers:

- Consultation/observation/feedback/ conferences	89%
- Resource (materials/equipment)	54%
- Training (workshops/inservice)	31%
- Team teaching	3%

- Types of activities performed with students:

- Direct teaching/group	77%
- Direct teaching/individual	48%
- Testing/assessment/evaluation	40%

- Sixty-eight percent of the teachers named testing as the activity that consumed the most time in the fall. Seventy percent named it as the predominant activity in the spring. Only in winter was teaching named as the predominant activity (83 percent of the teachers).

- Sixty-nine percent of the teachers said they established their own priorities in their programs. The principal was the next most often mentioned priority setter (31 percent), followed by the case study committee (29 percent).

A series of questions were asked related to training and role function, yielding the following responses:

- Eighty-six percent of the teachers were working in their professional areas.
- Seventy-eight percent felt there was a good match between their duties and what they were hired to do.
- Seventy-four percent felt there was a good match between their duties and what they were trained to do and that their expertise was being utilized to a significant degree.

When special education teachers were asked in what areas they would like to spend more time, most of the responses clustered in the following areas:

More Direct Service	15%
More Time in Regular Education Classroom	12%
More Testing	12%
More Resourcing to Teachers	9%

Regarding use of paraprofessionals, 66 percent of the special educators use aides in their programs. Eighty-six percent of those teachers utilize an adult in this role. In addition, 37 percent of the teachers use volunteers, of which 73 percent are adults.

In summary, the special education personnel interviewed were highly qualified and competent professionals. Despite special education teacher reports of interaction, case study observations and regular class teacher interview data suggest that direct interaction between regular and special education receives less emphasis than one might expect. This weakness in service delivery is by no means unique to DoDDS, but should be further explored.

Testing appears to be receiving a somewhat greater emphasis than one might expect. The reliance upon formal, standardized assessment procedures seems to be overemphasized in DoDDS. A soon to be released national survey sponsored by Special Education Programs (U.S. Department of Education) found nonstandardized assessment to be the fourth most frequently utilized set of techniques employed by placement committees stateside. The acceptance of nonstandardized, informal, and observational procedures should be explored more fully. In addition, the number of different instruments utilized by the DoDDS system makes a consistent data base a difficult task.

The independence of direct service providers in evaluating needs and accessing services is also noteworthy. In a specialty area where on average there is one special educator per school, this independence threatens the likelihood of consistent service delivery.

EDUCATIONAL SERVICE CENTER: AN ALTERNATIVE SUBREGIONAL SERVICE DELIVERY CONCEPT

The Educational Service Centers were established in a Germany-South reorganization initiated by the Regional Director. Five centers with similar staffing are designed primarily to service special education needs within the region. Although other functions are delegated to the centers, their primary functions lie within the special education area and include but are not limited to:

1. Coordination of local child-find activities. (Problems may arise because of 10-month employees.)
2. Coordination of local special education census.
3. Provision of assessment and evaluation of referred students requiring evaluation and placement services beyond those available within the limits imposed by testing materials available to the schools and training competency of local personnel. In one education service center testing appears limited, for the most part, to evaluating for self-contained placement and low incidence handicaps. In another area, with the number of small schools, basic assessment becomes a significantly greater priority.
4. Provision of inservice education to parents, local school educators, and case study committees. In this area service becomes spotty. Each center services approximately the same number of schools; however, some areas have a significantly larger population of children than do other areas. For this reason, backlogs in testing may preclude significant inservice activities.
5. Significant responsibility in mediation, hearings, and other due process activities. In two of three centers due process issues took a significant portion of the coordinators' and team leaders' time. Issues forcing these situations are:
    - Extremely limited military medical support, occupational therapy, physical therapy, psychiatry, medical, etc. (a situation now being corrected).
    - Lack of available programs. One example is the significant lack of programs for seriously emotionally disturbed children. DoDDS and the military medical community are taking action to provide such services. DoDDS presently requires additional teachers for the mildly disturbed child. Programs for trainable mentally retarded children have been provided in each Educational Service Center area; yet those classes for low incidence children are extremely small, and like stateside programs, there is a lack of interaction with peers or nonhandicapped children.

6. Coordination of school, community, and medical resources as needed for program implementation (a task currently being addressed).

7. Function as adjunct members of school case study committees. This role varies from center to center and from school to school within center jurisdiction. The idea is a good one in terms of greater consistency in the operation of the case study committee. Interestingly, the regional coordinator saw the role of the Educational Service Center participant to be the developer of the IEP. In no way was this reflected in the perceived role of Educational Service Center personnel.

8. Participation in IEP development (see number 7).

9. Provision of technical assistance to schools. This appears to be one of the strengths of the Educational Service Center configuration. Historically, individual personnel did provide this kind of assistance. Although center-based employees provide this assistance under the new system, a unified effort exists among the centers visited to provide this type of support through workshops, individual conferences, additional individual assessment, and support during case study committee meetings.

10. Provision of programs for parents, teachers, and aides to carry on with special needs children when appropriate. Little was observed or recorded in this area.

Overall, the functioning of the Educational Service Centers with regard to special education was seen quite positively. The difficulty that arises is that the Educational Service Centers have no goals or objectives upon which to be evaluated. The Regional Office has responsibilities and individual team members have responsibilities; the center as an entity does not. Despite this fact, the center seems to be a unifying force in service availability and delivery within the region. The Center is perceived positively by school administration personnel with whom we spoke in Germany-South. These school administrators often assume a leadership role in the provision of special education services.

Several cautions should be kept in mind when reviewing special education service delivery within this region. Currently, few available related services critical to the needs of low incidence handicapped children exist. There is need for the military medical community to meet the mandate of 1342.12 as they plan to during the 1983-84 school year. For example, family and individual therapy are critical for seriously emotionally disturbed children. Social work services and occupational and physical therapy should be available throughout most of the region.

Second, appropriate programs for Trainable Mentally Retarded children must be clustered to provide appropriate related services. If services were clustered in a regional center, appropriate service delivery could be accomplished.

Third, a clearer definition for speech pathologist and learning disabilities specialists assigned to the Educational Service Centers is needed. One center has redefined the speech role to a language specialist, but confusion abounds regarding the difference between these roles and the positions in the schools.

Fourth, there is no doubt that the needs of the region can be better met at the Educational Service Center level than they can be at the Regional Office level. As needs shift from school to school one might consider the flexible use of staffing within service center clusters. The underlying issue here is span of control. The Educational Service Centers currently have a monitoring and compliance function. It would seem natural for them to have a supervisory function as well. The current system's inability to provide adequate supervision of specialist personnel is a critical variable in effective service delivery to children who, by definition, are more difficult to handle. Of approximately 10 special education classroom observations made in Germany-South, only 1 was totally unacceptable, but many of the personnel could have benefited from clinical supervision. This is not to say that the majority of teachers observed were not competent but only that they could benefit from direct clinical supervision. Such supervision is currently not available in the region. If the low-incidence child were not serviced in the region, the Educational Service Center personnel could be utilized to some degree in this endeavor (as a support system to building administration).

Fifth, greater clarification as to who is certified to administer individual IQ tests is needed. Many people perform this function, but how they were certified is confusing at best. This is one of many issues tied to the new recertification process. The Educational Service Centers with their special education expertise might be in a better position to counsel people regarding special education recertification than is a local building administrator.

Sixth, the Educational Service Centers presently have psychologists in the team leader roles. This may not be the best use of limited resources. A generalist special education/administrative type might be a better choice for the role. In two of the three centers visited, the psychologists assigned to the team leader positions were highly competent and articulate professionals. They provide assessment expertise and balance the concept of the coordinator's being an educational administrator. Yet, because the coordinator role is part time, much of the administrative trivia fall to the team leaders and does not allow them to fully utilize their expertise. The other lingering question is whether the centers are too heavily assessment oriented and not concerned enough with program consultation (programming). Since the centers are new, this focus may change, but the emphasis certainly seems to be in the identification and assessment areas at this time.

POLICY IMPLICATIONS/RECOMMENDATIONS

The special education program within DoDDS has many strengths and has made good progress in meeting the mandate of 1342.12 which had its initial implementation in December of 1981. The following is a summary of those areas in which resources might be targeted or alternatives considered to strengthen overall service delivery.

Service Delivery--Local School

- Cohesive utilization of multiple special education resources in large DoDDS schools
- Formalizing of linkages between small school special educational resources and education program administrators' Educational Service Centers, or "district" units

(support services, diagnostic work supervision, and case study committee support)

- Use of the educational prescriptionist model in large schools or school clusters to lessen the burden of testing on direct service providers
- Examination of the increased use of informal and criterion-referenced tests in educational decision making

Service Delivery--Region

- Reconsider service delivery models to low incidence handicapped children by clustering those children or supporting private placement where clustering is not feasible
- Reevaluate special education expertise, role, and function at the regional level
- Implement policies to link local schools in cohesive, consistent service delivery efforts (subregionalization, clusters, Educational Service Centers) across all regions
- Reevaluate support services in terms of access, availability, and procedural guidelines (particularly occupational therapy, physical therapy)
- Redirect Regional Offices to reemphasize being in touch with local school needs
- Develop guidelines for evaluating regional/subregional service delivery

Inservice

- Emphasis on:
  - Special educator as consultant
  - Regular educator as support system
  - Teaming
  - Function of case study committee
  - Administrative role

Case Study Committee

- Clear delineation of roles
- Institution of case manager construct systemwide
- Greater emphasis on student/program match and links to regular education
- Exploration of possibility of pre-case study committee meeting to:
    - Deformalize the process for parents by making the process understandable in lay terms
    - Organize for more effective delivery
- Examination of the role of counselor/special educator/administrator as the case study committee chairperson
- Emphasis on record keeping within case study committee (e.g., minutes/summary of meetings)

Consistency of Program

- Regional impact on local service delivery
- Consistent policies throughout DoDDS on identification and service delivery
- Use of subregional/district unit in consultative/supervisory role
- Consistent application of definitional frame of reference (e.g., learning development/learning disabilities)

Low Incidence Handicapped

- Reevaluate policies, needs, and alternatives for appropriate service within unique structure of DoDDS

Military Role

- Make the role of the military consistent in assignment and transfer of families with special needs children
- Delineate more clearly on-line service capability by region/subregion of military medical resources

- Review the role of those providing linkage between military community and the schools (principal/schools officer/community commander)

Parent Advocacy

- Examine whether schools (teachers) should assist in the development of parent support groups where no formal advocacy exists (as we know it stateside)

Program Implementation

- Feasibility of computer-assisted IEP development to aid consistency
- Attempt to make parent participation more meaningful by encouraging ongoing parent involvment
- Reemphasis on "present levels of educational performance" and learning style in programming decisions
- Emphasis on case manager role
- Emphasis on peer group compatibility in decision making
- Emphasis on access to regular classroom in decision making
- Emphasis on student progress report in data base
- Concerted effort to hire noncategorically trained or cross-discipline trained personnel

CHAPTER 5

TESTING AND EVALUATION

DoDDS engages in several evaluative activities designed to strengthen the curriculum. These may be roughly divided into two major groups: those that examine the quality of the educational program delivered to the students, and those that examine the quality of the outcomes of instruction within DoDDS. The feature that distinguishes the two modes of evaluation is that the former seldom uses test information, while the latter is almost exclusively concerned with results of standardized testing.

PROGRAM EVALUATION ACTIVITIES

Two activities produce evaluations of the curriculum delivered to students: the school accreditation reviews and the Five-Year Curriculum Development Plan. The former provides DoDDS with a comparison to established standards of performance developed in cooperation with a large number of schools in the United States, while the latter is the system's internal process for curricular review and improvement.

School Accreditation

DoDDS has contracted with the North Central Association [NCA] to accredit all of its schools (except those considered too small--an enrollment of 150 or less). NCA serves this function for a group of 19 states in the continental United States. NCA sets standards in many areas, including pupil-teacher ratios, school supplies, school facilities, administrative services, teacher qualifications, and the adequacy of the comprehensive program.

When a school is under review, its staff is required to prepare a "self-study" of all the aspects of the school. This usually takes a committee of several teachers and an administrator about one semester to develop. Then a site visitation team of two stateside educators, along with educators from schools within the same region and schools from other DoDDS regions, spends several days on site observing classrooms and interviewing personnel. At the end of the visit they prepare written comments related to each of their standards which are presented to the school and to the Regional Director, and forwarded to the Office of Dependents Schools.

The school is then required to develop a plan to correct any deficiencies noted. It must file an annual report that includes an audit of the credentials of new or reassigned teachers which describes the progress made to rectify previously identified problems. The cycle of self-study/visitation followed by annual reports is repeated every five years for secondary schools and elementary schools.

This accreditation activity assures the overall quality of the educational offerings in DoDDS and their comparability to those of stateside schools. Each reviewed school obtains insights into its operations, and the entire system benefits from having a reference group of states, districts, and schools to use for comparisons. (See, for example, DoDDS vs. NCA: How Do We Really Compare? prepared by the Evaluation Branch of DoDDS.)

School-level personnel that we interviewed, especially teachers, were not very enthusiastic about the NCA process, however. Seventy-five percent of the principals in our interview sample had been involved in the self-studies and visitations, and 28 percent of them saw a significant benefit in the area of curriculum review. Of the teachers we interviewed only 15 percent thought there was a benefit in the area of curriculum review. Fifty-eight percent of the teachers saw no benefit, while 24 percent of the administrators indicated that the time required was a liability.

The NCA process is relatively expensive. All of the TDY for the visitors to each school is paid by DoDDS. The decision to exempt the smaller schools from review seems reasonable because of this cost factor, and because of the amount of staff time that must be devoted to the preparation of the self-study and to the site visit. However, DoDDS does need to determine an activity to use in lieu of NCA accreditation so that all schools in the system are reviewed periodically. We recommend that a local group composed of parents and staff prepare a statement evaluating the school using NCA standards.

The Curriculum Development Plan

The Five-Year Curriculum Development Plan ensures that each curricular area is reviewed systematically. There are three phases to this effort. In the first year of review, samples of teachers, principals, parents, and students are surveyed to determine what is effective and ineffective about the present curriculum in a given area (e.g., science). The regional coordinators for that subject area meet to review the survey results and determine whether the curriculum guidelines should be revised.

This survey process does have problems. The samples of respondents are not probability samples--that is, they cannot be weighted to give estimates that are statistically unbiased for the population in question (e.g., all elementary teachers in the system). The schools are chosen to participate in a way that minimizes the burden (at any one school) of responding to all the survey instruments and other information requests that go to samples of schools during the year. The sample chosen may be capable of producing unbiased results, but there is no way to know what weights would produce this outcome. In the most recent evaluation of language arts, some regions sent back more questionnaires than were expected, while others sent back fewer. Such events probably introduce additional biases for which an appropriate adjustment is not known.

Finally, the analysis of these data has been performed by outside contractors in the past because there was insufficient hardware, software, and data analytic expertise in the Evaluation Branch to perform the analyses at ODS. However capable the outside contractors, they cannot be as responsive to questions that would be raised in interactions between the Evaluation Branch and the curriculum coordinator as an in-house data analytic staff would be. Once the outside contractor completed the contracted-for analyses, there was no opportunity to explore the data further. This situation will change as ODS acquires computer hardware capable of dealing with the data bases involved in these studies, and acquires the necessary software and personnel to perform these analyses.

The second phase begins with the results of the surveys. A broad selection of instructional materials offered by publishers is made, using the criterion that they must cover the objectives set out in the (revised) curriculum guides. These materials are then pilot tested (usually for less than a full academic year) by schools that volunteer for this activity. The pilot test focuses on the ease with which teachers can use the materials in the classroom; it does not include achievement test data. Usually there are too few schools to provide valid indications of differential effects in any case. On the basis of this piloting, a final selection of materials is made--about three to five texts and associated materials. It is then up to the teachers to make the final selection of materials to be used in each school. In the final phase of the plan, the selected materials are used to implement the curriculum.

Because there is no policy requiring that all teachers in a region agree to one text at a given grade level, materials may be heterogeneous within a region. While there is little evidence to support a conclusion that children experience difficulties if they change text series from grade to grade or school to school, we found during our case study visits that some staff at all levels wished there were more uniformity of selection.

It could be argued that if all teachers were teaching according to the DoDDS Scope and Sequence, it would not matter which texts were used because they all are presumed to cover the curriculum adequately. However, we discovered a problem with this reasoning during the case study site visits. Some teachers who changed schools within one region experienced difficulties accommodating to different science materials. Apparently publishers prepare very different kits of materials to use in demonstrations: some have all the needed parts in clearly labeled packages, while others require that some parts be found elsewhere. Some teachers felt the demonstrations required too much preparation time because of problems with the materials.

Because the initial curricular review studies are conducted on samples, and because only a few schools participate in piloting, it is not surprising that only 22 percent of the teachers we interviewed (and 23 percent of the principals) stated they had been directly involved in curriculum evaluation studies. On the other hand, 73 percent of the principals said they received results from the evaluations, and 75 percent of these said they reported the results to their faculty. However, 71 percent of the teachers we interviewed said they had not personally reviewed the results of program evaluations.

Teachers also participating in curriculum development also reported that there was no clear procedure for monitoring change in the curriculum. Thirty-nine percent of these teachers said there was no monitoring or poor monitoring; and 39 percent said there was only informal monitoring of change; 15 percent reported formal evaluations; the remainder were uncertain of what was done.

Although a majority of the surveyed principals (54 percent) indicated that the Five-Year Curriculum Development Plan was either "moderately" or "very" useful, it seems that the largest impact the process has is to direct the purchasing of new texts. It is not clear that the results of the evaluation of the curriculum reach the teachers in a manner that enables them to analyze the new texts and other materials to be sure that instruction will cover all elements in the curriculum, in the sequence specified by DoDDS.

Generally speaking, the Five-Year Curriculum Development Plan permits the selection of materials that meet the needs of DoDDS students. Questions were raised, however, about having the cycle be the same length in all subject areas. It is not likely that the English curriculum or math curriculum will change fundamentally in the next several years, for example. The cycle in these areas could be extended with the proviso that as microcomputers become more available, supplementary "courseware" in these fields be reviewed systematically. The lengthened cycle would permit more emphasis on training DoDDS teachers to implement the Scope and Sequence from the texts they have chosen.

Another argument for lengthening the cycle can be made by inspection of the timing of the cycle. When the cycle operates as specified, teachers choose new materials in the third year, then implement them for one year before the cycle starts again with the review phase. It would be desirable to have a longer period of implementation so that teachers could thoroughly learn the strengths and weaknesses of the materials prior to starting the review process again.

In other areas, such as computer science, the curriculum might require more frequent review and updating than even the present five-year cycle permits. It might be prudent to implement an alternative to the usual cycle in such areas. For example, groups of teachers in the specialty could be designated to monitor new developments and would have the authority to pilot new materials. They would be required to report on the effectiveness of these materials to all DoDDS teachers of that subject through ODS.

EVALUATIONS OF STUDENT ACHIEVEMENT

Testing is the most fully developed technology educators can employ to assess student achievement. Tests can inform pupils (and their parents) of their progress, they can help to place students into homogeneous instructional groupings, they can be used to assess the needs of students, and to evaluate instructional outcomes. DoDDS employs many testing activities to learn about the achievements of its students. This section discusses achievement tests mandated by the regions and by ODS as well as some research-oriented testing activities in which DoDDS participates.

Regional and Systemwide Testing

Exhibit 5-1 shows the scope of these activities during the school year 1982-83.

TESTS	GRADES	REGIONS	TEST DATES
Metropolitan Readiness Tests [MRT] Measure Skills Important for Success in Beginning Reading and Mathematics	1	All DoDDS	First 2 Weeks of School
Systemwide Testing Program [STP] Assess Basic Skills in Reading Language Arts and Mathematics	4,6,7, 9,11	All DoDDS	Sept. 20-24
Comprehensive Tests of Basic Skills [CTBS] Form U	2-12	Germany-South	Sept. 20-24
Assess Basic Skills in Reading, Language Arts, Mathematics, Science, and Social Studies	2,3 5,8	Mediterranean	Sept. 20-24
	2,3,4, 5,8,10	Atlantic	Sept. 20-24

EXHIBIT 5-1

SCHEDULE OF FALL TESTING IN DoDDS
SCHOOL YEAR 1982-83

The Metropolitan Readiness Tests measure the abilities of students at the start of first grade. The tests are not intended to measure the outcomes of the kindergarten curriculum. Their primary use is to place students into homogeneous instructional groups in reading and math, to facilitate instruction in these subjects.

The Systemwide Testing Program (STP) occurs in the fall in grades 4, 6, 7, 9, and 11. The test presently in use is prepared to DoDDS specifications by a nationally recognized publisher of standardized tests (CTB/McGraw-Hill). This test covers the basic skills in reading, mathematics, and language arts and may be scaled to national norms so that the results can be expressed in a form permitting comparisons to the performance of stateside schools and districts.

Germany-South, the Mediterranean, and the Atlantic all supplemented the STP with tests at other grade levels and other subject areas. Interestingly, the test they used, Form U of the CTBS, is a parallel form for Form V of the CTBS, which was the basis for the formation of the STP. Thus, in Germany-South there seems to be considerable redundancy in the testing effort, with the students taking both the STP and the CTBS in five grade levels. Compressing this much testing into the same period as other regions allotted to the STP alone may have had an influence on the test scores from that region.

Obtaining information about student achievement at grade levels not covered by the STP could make it possible to identify curricular weaknesses or student needs more precisely than would be possible with the STP alone. (In fact, the STP will soon be extended to include grades two and three). However, we did not find a region with a comprehensive plan (or guidance to schools) for interpretation of these test results.

The information about other curricular areas (science, social studies) could be valuable to be sure that the entire curriculum is addressed. A danger in any testing program is that the test will imply a "preferred curriculum" that will become the focus of teacher efforts. Expanding the areas covered by the tests is one way to assure that such a narrowing of focus does not occur.

We asked teachers and principals a number of questions about the STP in our surveys and interviews. The data we report should be treated cautiously because STP was in its first year of implementation--testing had been conducted, but reports had not been received back at the schools at the time of our inquiries. Some of the teachers and principals may have responded with the former system-wide testing program (Basic Skills Assessment Program) foremost in mind. Others may have answered in terms of their regional program of testing. Some may have felt hesitant to give categorical responses because they had not yet experienced the STP. With these cautions in mind, we turn to the results of our data collection activities.

The first area of interest is the STP training provided to educators. DS Regulation 2000.6, Department of Defense Dependents Schools Pupil Assessment Policy, states:

> IV.C . . .Regional directors will develop and conduct appropriate staff development and training programs to familiarize the professional educators with the assessment programs and appropriate interpretation of test results.

We asked principals about the implementation of this policy and found that 80 percent of our interview sample (39 principals) had received training in interpreting and using the STP results. Thirty of these principals gave further descriptions of the training they had received, and 73 percent of them said it was in the form of an inservice workshop. Others reported a variety of methods, including individual consultation.

Nearly 70 percent of the principals interviewed said that their teachers also received training in interpreting and using the STP results. Twenty-six of these principals described this training in more detail, and 35 percent of them said it had been a formal workshop by regional personnel, while 19 percent said it had been a formal workshop conducted by school personnel. Twenty-seven percent said that they had answered individual questions about the STP in an informal way (i.e., no formal training was provided).

Teachers were also asked about the training they received. About 40 percent responded that they had received training. This figure is consistent with the fact that the STP is given in about 40 percent of the grades. Teachers who had been trained gave descriptions of the training methods that corresponded to those provided by the principals. A somewhat larger percentage (52 percent) of the teachers we interviewed indicated that they had materials and guidelines from DoDDS to help them interpret test results. When asked to rate these materials, the teachers who had them gave a mean rating almost exactly at the mid-point of the scale, indicating moderate satisfaction. Seventeen percent said they were very satisfied.

Our data collection occurred before we could obtain data about the effectiveness of the training provided in the use and interpretation of STP results. We do believe, however, that training needs should be expanded to more teachers in the system. Teachers often change the grade levels at which they teach, and new teachers come into the system each year, so there will be a need to constantly repeat the training. Furthermore, the use of the test results is probably not limited to the grade levels at which they are given. Teachers of the grade levels tested need to know how to interpret the individual test scores to the parents with whom they will share the results, and how to use those scores, along with other information, to form instructional groups in their classes. Teachers at other grade levels (especially those who teach at the prior grade levels) need to know how to use the results of the tests in reviewing the curriculum.

The second question of interest has to do with the release of information to parents and the community. DS Regulation 2000.6 states that "individual pupil results of the assessments should be reported to the pupils, their parents, and their classroom teachers." Data from the 39 principals we interviewed indicated that nearly 80 percent release the results of the testing to the community. (Clearly, these data refer to previous practice; STP results were not yet ready for release.)

Ninety-seven percent of 30 principals who described the methods they used to communicate the results indicated that they used individualized methods (e.g., sending reports home to the parents or having teachers hold parent conferences), while 27 percent indicated that they issued a newsletter reporting on the school's overall performance. Teachers reported the same frequency of use of individualized methods of communicating test results.

Teachers are more likely than principals to have to interpret the scores on the tests to students and parents, so we asked them if they were able to do this. (Again, the responses should be treated cautiously: teachers had not yet performed this activity using the STP.) About 22 percent did not feel able to make these interpretations. Probably not all of these teachers were in grade levels where the STP was given, but these data indicate a need for training to cover more teachers.

The third area of interest for the Comprehensive Study was the use of the tests by teachers and principals. DoDDS is relatively unusual compared to stateside school districts in giving its tests in the fall only. Most stateside districts prefer to test in the spring. Tests given at either time can be used to assess the results of the preceding instruction and the preparation of students for subsequent instruction. But there are cautions in regard to these usages, depending upon whether one is testing in the fall or spring.

Spring tests assess the outcome of previous instruction to that point. They reflect the influence of the instruction that has occurred since any prior test and can be used as a basis for assessing the adequacy of the curriculum without accounting for what students will forget in the subsequent fall. Thus, they may not be ideal for placing students in the fall, or for deciding how prepared the students are for the next instructional units, because students will forget at different rates over the summer. A related problem occurs if there is a lot of student turnover during the summer. Test scores may not exist for many new students.

Fall tests assess the preparedness of students for the next instructional units. If there is a lot of turnover during the summer, these tests provide the most complete data on the students for use in placing them into instructional groupings. Fall tests also depict the results of the instruction that has occurred since the previous testing, including the forgetting that took place over the most recent summer. Without an accounting of summer activities that might reinforce or diminish prior learnings, it may be hard to attribute the test scores to the results of previous instruction. In addition, if many new students are tested in the fall, their scores should be factored out of the assessment of the instruction offered to students in the previous year.

A particular problem with fall testing is assuming that something special needs to be done in the grade level students are entering to remediate apparent weaknesses in the fall test profiles. The curriculum may already address these weaknesses, and effort can be wasted in trying to make special accommodation for apparent deficits. The Germany-South Regional Office reported an experience like this where a fall testing (with the CTBS) indicated a deficit and effort was put into planning a remediation for the next year, only to find that the spring test scores revealed no further deficit in that area.

We surveyed principals and teachers concerning the uses of system-wide tests in the schools. (The reader is again cautioned that the data reported here reflect experiences of teachers and principals with previous testing programs, not STP.) Exhibits 5-2 and 5-3 indicate that the principals generally found the test results to be more useful than teachers did. Probably the most interesting result in this figure is that while two-thirds of the teachers reported that the system-wide tests were not used or were useful for one or moreof several listed activities, one-third did not. Teachers do not receive reports designed for

AREA	VERY USEFUL	MODERATELY USEFUL	NOT USEFUL	NOT USED AT ALL
Curriculum and Instructional Planning in Classroom	10%	43%	23%	25%
Communication with Parents about Their Children	18%	48%	17%	17%
Communication with Community/ Interest Groups	7%	40%	24%	29%
Identification of Curricular Strengths and Weaknesses in Classroom	17%	44%	20%	19%
Placement and Grouping of Students for Instruction	14%	38%	23%	24%
Identification of Students Who Need Further Instruction	21%	44%	17%	18%

EXHIBIT 5-2

UTILITY OF SYSTEMWIDE TESTS AS REPORTED BY TEACHERS

AREA	VERY USEFUL	MODER-ATELY USEFUL	NOT USEFUL	NOT USED AT ALL
Curriculum and Instructional Planning in Classroom	32%	56%	7%	5%
Communication with Parents about Their Children	55%	39%	4%	2%
Communication with Community/ Interest Groups	37%	49%	10%	4%
Identification of Curricular Strengths and Weaknesses in Classroom	50%	41%	6%	4%
Placement and Grouping of Students for Instruction	27%	44%	21%	8%
Identification of Students Who Need Further Instruction	39%	46%	10%	4%

EXHIBIT 5-3

UTILITY OF SYSTEMWIDE TESTS AS
REPORTED BY PRINCIPALS

dissemination to the community or interest groups, so their lower ratings of this use are not surprising. The fact that 48 percent of them report that the tests are not useful or not used in curriculum and instructional planning in their classrooms, and nearly 40 percent gave the same ratings to using the tests to identify curricular strengths or weaknesses in their classrooms, indicates that one major use may not have been addressed in the training for teachers. Again, because the STP is so new, we could not determine whether teachers would find it easier or harder to use for this purpose than the tests used previously.

Apparently one of the major problems with the previous systemwide testing was the untimely return of results. Fifty-five percent of the teachers we interviewed indicated that the results of the tests came back too late to be useful. This is another problem with fall testing. Spring testing allows the test results to be processed during the summer session so they can be ready for use in the fall. When the test is given in the fall, it has to be processed very rapidly (increasing the chance for undetected errors to crop up) in order to be of use to teachers and principals in the field. Since STP results were arriving at the schools in mid- to late-November, some instructional time passed before the tests could influence curriculum review or student placements.

Another factor that influences the utility of test data is the match between the curriculum and the content of the test. STP is designed to reflect the objectives of the DoDDS curriculum. But data from our survey indicate that 70 percent of the teachers state that the match between the test and the curriculum is good; thirty percent do not. Again, this must be interpreted with caution. The testing with STP had taken place, so teachers who gave the test were familiar with the content. Some of the negative responses could be reflections of problems with the prior testing system; others could reflect teachers' feelings that the concentration on reading, mathematics, and language arts did not represent the full curriculum sufficiently well. At this point in time, we can only treat these data with a caution flag. DoDDS should devote additional effort to assessing whether teachers continue to perceive a mismatch between the STP and the curriculum, and why. Achieving a greater consonance between the two will make the test results more useful to the educators in the system.

In addition to the system-wide tests, teachers were asked about tests they used in their individual classrooms. Fifty-three percent of those surveyed indicated that they used reading achievement/placement tests, and 45 percent indicated that they used the reading tests that accompany texts. When teachers were interviewed about how they assessed individual students, 60 percent said they used teacher-made tests; 50 percent reported using observations; 39 percent used standardized tests; and 32 percent reviewed each student's school work. Obviously, many of these teachers used these methods in various combinations.

It is clear that student testing and evaluation are important activities of teachers in the DoDDS system. In view of this fact, we surveyed teachers concerning their perceived needs for inservice training in the areas of testing and evaluation. Thirty-three percent of the respondents rated their need as being either four or five on a five-point scale (five indicating high need). We feel that this is a need that DoDDS should address systematically through a program of inservice training.

DoDDS Participation in Research Studies

DoDDS can obtain additional information about the performance of its schools by participating in studies that originate in the United States and have a national scope and purpose. Two such studies that DoDDS has participated in are the National Assessment of Educational Progress [NAEP] and the High School and Beyond Study [HSB].

NAEP is an attempt to indicate how students at various grade levels perform on tests that are usually geared to practical performance of tasks involving basic skills, or to knowledge of facts about the operation of American institutions (such as the legislative, judicial, and executive branches of the government). NAEP tests samples of students in several areas and repeats these assessments from time to time, providing a basis for longitudinal comparisons of data about particular curricular areas. NAEP uses highly standardized forms and testing procedures to assure this comparability across time and across regions of the country.

DoDDS has participated in the NAEP writing assessment and has also borrowed some of the items from NAEP for administration to its own students, in order to provide curriculum needs assessment data or to form a basis for comparing DoDDS students to stateside students. When needs assessment purposes were served, DoDDS did not use the identical test form or manner of presentation, so the data are not exactly comparable. However, they do provide a reasonable benchmark to DoDDS, and we would encourage DoDDS to continue to use these tests.

The High School and Beyond Study (initiated in 1980) is a companion to the earlier (1972) National Longitudinal Study. The goal of these two studies is to track cohorts of students from their senior year of high school through their early adulthood. In addition, the High School and Beyond Study includes a survey of sophomores who were to be followed up as seniors and then tracked into early adulthood. In addition to collecting data on about 28,000 seniors and 30,000 sophomores, the study team gathered data on the schools and on some of the families of these students.

DoDDS replicated the student assessment in its own schools but did not collect any of the related school or family data. The information collected on students consists of more than 600 data elements representing scores on a variety of aptitude and achievement tests, background on socioeconomic status, homework and TV watching habits, aspirations, and the curriculum the students were exposed to in high school. This is a rich data base and the only one in which all of these data are available for both stateside and DoDDS students. Chapter 6 reanalyzes some of these data to indicate how DoDDS education differs from that of stateside schools.

Participation in these activities gives DoDDS important opportunities to compare the performance of its students to their stateside peers. Unfortunately, the lack of computer hardware, software, and knowledgeable personnel in ODS has precluded secondary analysis of this data in the past. The repository for the DoDDS data files is the Defense Management Data Center which maintains the working files to be used when called upon by the Evaluation Branch of DoDDS. Current acquisition of software and trained personnel will provide secondary analysis capability.

While the new computer systems recently acquired by DoDDS should be capable of dealing with the DoDDS part of the High School and Beyond data base, DoDDS probably cannot be expected to deal with the stateside data base. We understand that DoDDS is planning to contract out some additional studies of the High School and Beyond data, notably the first follow-up to the 1980 data collection, which occurred in 1982. It is important that this activity be fully funded and supported by DoDDS.

SUMMARY OF RECOMMENDATIONS

- Accreditation by NCA should be continued. DoDDS must decide how to treat small schools in the system so that they are given systematic and periodic review of a similar nature.
- The Five-Year Curriculum Development Plan should be continued. However, some consideration should be given to lengthening the cycle for such stable curricular areas as English and mathematics. For subjects such as computer science, an alternative mechanism might be more appropriate to ensure that curriculum in this field is kept up to date.

- The Systemwide Testing Program should also be continued, but due consideration should be given to changing the testing date to the spring. We believe this would make the results much more timely and useful to educators.

- The fact that some regions are testing in other curricular areas might indicate that there is a systemwide desire for more information about performance in science and social studies. Consideration should be given to making these tests systemwide but not necessarily annual. However, a decision on this also must address the transient student population served by DoDDS.

- More inservice training on both the evaluation of curriculum and the interpretation and use of test scores is needed. This should be initiated as an ODS-sponsored and directed effort to be sure that it is applied uniformly across all regions.

- DoDDS should continue to use items from the National Assessment of Educational Progress to provide benchmarks against which to compare their students.

- DoDDS should continue to fully fund participation in the High School and Beyond Study to obtain the full benefits of participation in this major nationwide assessment of the curriculum of high schools.

CHAPTER 6

STUDENT ACHIEVEMENT AND ATTITUDES

This chapter of the report assesses the achievement and attitudes of students in DoDDS schools. The vehicle for this assessment is a comparison of DoDDS students to their stateside counterparts. To accomplish this comparison we rely on data collected in a large-scale study of high school sophomores and seniors known as "High School and Beyond." This is the only source of information that contains data about the achievement and attitudes of high school students as well as background information about their academic programs and their families. Using these data, we can compare high school students in DoDDS to stateside students while controlling for the various background factors.

THE DATA BASE

High School and Beyond is a major longitudinal study of the sophomores and seniors enrolled in the nation's high schools in the spring of 1980. It is being conducted for the National Center for Education Statistics by the National Opinion Research Center. A total of 58,270 students in 1,015 stateside schools were sampled and 638 pieces of information were recorded for each one. In a parallel effort, the Department of Defense Dependents Schools used the same student-level instrumentation to sample a total of 3,107 students in 60 of the high schools in the system. Follow-up data collection is presently being conducted with students from both of these samples in order to examine what happens to students as they progress through, and leave, high school.

The comparisons to be reported in this section deal with the seniors in the two samples. This permits us to compare students with the greatest exposure to DoDDS and stateside schools. We have limited the selection of seniors in the stateside sample to those who were attending public schools in the spring of 1980. We will concentrate on the two largest sub-groups in both of the samples: students who were in either general or academic programs. There were too few students sampled from DoDDS schools who were enrolled in vocational programs to permit accurate comparisons to the stateside data.

OVERVIEW OF THE PRESENTATION

The results will be presented by sub-group. Within each presentation we will examine some of the background characteristics of the students, their opportunities to be exposed to instruction in various courses, their scores on tests of achievement, and their attitudes. In the last part of this chapter we examine the relationships of background characteristics and exposure to instruction to achievement and contrast the DoDDS sample of students in academic programs to the stateside sample of such students.

SENIORS IN ACADEMIC PROGRAMS--BACKGROUND CHARACTERISTICS

Exhibits 6-1 and 6-2 show that stateside and DoDDS seniors in academic programs differed in several salient background characteristics. The two populations have about the same proportions of men, DoDDS has a smaller proportion of blacks, but higher proportions of Asian and other (probably mostly hispanic) students. DoDDS seniors had enrolled in about equal proportions in each possible category (grade 9 includes students who enrolled prior to grade 9), while the majority of stateside seniors had enrolled prior to or during the 10th grade. DoDDS seniors were living with both parents more often than their stateside counterparts. DoDDS seniors reported that they were more involved with the testing than their stateside counterparts (indicating both that they were involved in the tests and that they rarely thought of other things during the testing period).

DoDDS seniors in academic programs were of slightly higher socioeconomic status [SES], did slightly less homework, watched less TV, and were a bit older than their stateside peers. These differences were not statistically significant.

SENIORS IN ACADEMIC PROGRAMS--COURSES COMPLETED

Exhibit 6-3 shows that DoDDS seniors in academic programs completed more courses in mathematics, English or literature, history or social studies, and science than did stateside seniors in such programs. This is evidence that, in general, DoDDS students are not penalized by limited access to courses.

VARIABLE	CATEGORIES	ESTIMATED PERCENTAGES OF SENIORS IN EACH CATEGORY	
		DoDDS	STATESIDE
Sex	Male	51.6%	48.7%
	Female	48.3	51.3
Race	White	82.2	84.4
	Black	6.9	11.0
	Asian	5.1	1.8
	Other	5.1	2.3
	American Indian	.8	.5
Grade of Enrollment at This School	9 (or earlier)	24.1	57.2
	10	25.9	34.0
	11	26.9	5.7
	12	23.1	3.0
Parents at Home	None	4.0	3.8
	One	15.6	21.1
	Both	80.4	75.1
Involved with Testing	No	44.0	54.8
	Yes	56.0	45.2
		(N=563)	(N=6,857)

Any difference in the percentages reported by DoDDS stateside respondents that exceeds 5 percent is significant at the $\alpha = .05$ level.

EXHIBIT 6-1

PERCENTAGED BACKGROUND CHARACTERISTICS OF SENIORS IN ACADEMIC PROGRAMS

	DoDDS		STATESIDE	
VARIABLE	MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
SES	2.4	7.0	2.2	6.8
Homework	5.2	1.2	5.3	1.3
TV Watching	3.6	1.8	4.2	1.7
Age	17.5	.6	17.4	.6

The homework scale is from 1 (no homework) to 7 (more than 10 hours per week). A value of 4 means 1 to 3 hours per week, a value of 5 means 3 to 5 hours per week, and a value of 6 means 5 to 10 hours per week.

The TV watching scale is from one (Don't watch TV) to seven (five or more hours per day). A value of two means less than one hour per day, a value of three means between one and two hours per day, and a value of four means between two and three hours per day.

SES is a composite variable made up of indicators of the income and educational levels in the household as well as indicators of whether or not certain items were present in the household.

Standard deviations for the DoDDS sample are weighted estimates that do not account for design effects. Separate analyses showed that design effects were very small in the DoDDS version of the High School and Beyond Study. These estimates are believed to be conservative because they are uncorrected for the fact that data were collected on roughly 25 percent of the DODDS seniors.

Except for TV watching and age, the differences between stateside and DoDDS averages fall within 95 percent confidence bands around zero.

EXHIBIT 6-2

AVERAGE BACKGROUND CHARACTERISTICS OF
SENIORS IN ACADEMIC PROGRAMS

	YEARS COMPLETED		
	1 OR LESS	1.5 to 2.5	3 OR MORE
Mathematics			
DoDDS	6%	40%	54%
Stateside	12%	35%	53%
English or Literature			
DoDDS	0%	4%	96%
Stateside	1%	10%	89%
History or Social Studies			
DoDDS	1%	47%	52%
Stateside	9%	47%	44%
Science			
DoDDS	11%	45%	44%
Stateside	22%	36%	42%

EXHIBIT 6-3

PERCENTAGES OF DoDDS AND STATESIDE SENIORS
IN ACADEMIC PROGRAMS
COMPLETING DIFFERENT NUMBERS OF
YEARS IN VARIOUS SUBJECTS

Exhibit 6-4 compares the percentages of DoDDS and stateside seniors in academic programs who took courses of special importance to college-bound students. The DoDDS seniors take these courses more often, with the exception of trigonometry and calculus. The major differences are in the propensity to take foreign languages, physics, and more than three years of English or literature. The reported percentages for foreign languages are probably underestimates of both the DoDDS and stateside true percentages. The reason is that the instrumentation for High School and Beyond only inquired about French, German, and Spanish. Many high schools offer other languages, such as Russian or Latin. It is possible that the underestimate is more severe in the DoDDS population because DoD high schools may offer an even greater variety of languages than would high schools in the U.S. due to the importance of the host-nation programs.

While it is important that DoDDS seniors have more exposure to each of these courses than their stateside counterparts, it is also important to see whether they are able to take patterns of courses that are required for admission to colleges or universities. The higher mobility of DoDDS students might lead to situations in which a student would miss the first in a sequence of courses and be unable to finish the entire sequence. This would make it less likely that students would take a pattern of courses that would qualify them for admission to colleges or universities.

COURSE	DoDDS	STATESIDE
More Than Three Years of English or Literature	42.3%	26.4%
At Least One Year of a Foreign Language	74.9%	65.1%
Two or More Years of a Foreign Language	49.5%	39.1%
Geometry	91.1%	85.0%
Algebra II	81.7%	77.5%
Trigonometry	50.7%	52.3%
Calculus	16.5%	18.8%
Chemistry	75.4%	69.3%
Physics	51.3%	39.8%

Differences between DoDDS and stateside percentages that exceed 5 percent are significant at the .05 level.

EXHIBIT 6-4

SENIORS IN ACADEMIC PROGRAMS:
PERCENTAGE TAKING SPECIFIC COURSES

A major re-examination of entrance requirements is currently underway at most colleges and universities (McCurdy, 1982). For the most part, the entrance requirements are being raised to assure that entering freshmen will be capable of doing college-level work. Two such standards were used in the following investigation. While not "universal," they provide a good benchmark against which to compare DoDDS and stateside students. The first standard comes from the California State University system. It requires four years of college preparatory English and two years of college preparatory mathematics and is scheduled to become effective for the fall of 1984 (when students who are now in grade 11 will be admitted as freshmen). At issue is the definition of "college preparatory," as most entering California freshmen have four courses of English and two in mathematics. According to McCurdy (1982), the hope is that by making the requirement firm, high schools will assure that students take solid courses. For the purpose of this presentation, it was assumed that a senior with more than three years in English or literature and either geometry or algebra II would meet the course requirement for admission to the California State University system. (Separate analyses show that nearly all of these students took algebra I, and it was unlikely that a student would take trigonometry or calculus without having both geometry and algebra II.) Applying these criteria to the DoDDS and stateside samples resulted in the estimate that 38 percent of DoDDS seniors in academic programs would meet the requirement, compared to only 23 percent of their stateside peers. Thus the advantages in courses taken by the DoDDS students, especially in English or literature, combine to yield a substantially larger percentage of students who meet this requirement.

The second entrance requirement is taken from the (more selective) University of California system. The requirement consists of four years of college preparatory English, three years of college preparatory mathematics, one year of laboratory science, one year of history, and two years of foreign language. It also mandates that at least 7 of the total of 16 required units (including electives) be taken in the last 2 years of high school. This requirement is to be in effect for the selection of freshmen to enter in 1986 (i.e., it will affect students now enrolled in ninth grade).

Because, as discussed earlier, the number of seniors with two years of a foreign language is probably underestimated, there will be a corresponding underestimate of the number of students meeting the University of California admission requirement. In addition, the High School and Beyond Study only inquired about chemistry and physics, although many high schools offer a laboratory course in biology. This will also produce underestimates of the true proportions who would meet this entrance requirement. Data from the follow-up of the sophomores of 1980 will provide better estimates because these students were asked about biology and other foreign languages. Nevertheless, we believe the data about 1980 seniors provide a useful and interesting comparison.

For the purposes of this presentation, students were counted as meeting the requirement if they took more than three years of English or literature, at least one year of history, both geometry and algebra II, either chemistry or physics, and at least two years of a foreign language. Applying this requirement to the 2 samples resulted in an estimate that 17 percent of the DoDDS seniors in academic programs would satisfy the requirement, compared to only 7 percent of their stateside counterparts. In addition to the fact that these are certainly underestimates, it should be remembered that requirements of this stringency were not commonplace in 1980. Students may not have been planning programs of this type at that time.

DoDDS should be sure to replicate these analyses with the data obtained from the follow-up of the sophomores of 1980.

In order to examine further the influence of the mobility of DoDDS seniors on their course-taking patterns, we can determine how the grade of enrollment influences the likelihood of meeting the two entrance requirements given above. This enables us to say whether a transfer of schools has an influence on the student's capacity to put together an appropriate college preparatory curriculum.

Another issue of concern to DoDDS is the capacity of smaller high schools to deliver an appropriate college preparatory curriculum. DoDDS high schools are, on the whole, smaller than their stateside counterparts. DoDDS' Evaluation Branch reported (DoDDS vs. NCA, How Do We Really Compare?, 1981) that the average DoDDS high school had about 506 students compared with an NCA [North Central Association] average of 931. Only South Dakota had a smaller average school size among the NCA states. To measure size, we used the number of seniors enrolled in 1979-80. Three categories were formed: small, having fewer than 40 seniors enrolled (33 percent of the schools fell into this category); medium, having senior enrollments between 40 and 100 (38 percent); and large, having more than 100 seniors enrolled (28 percent).

Models were fitted that examined the relationship of the size of school, the grade of enrollment, and their interaction to the likelihood of meeting the two entrance requirements given above. Statistical analyses indicated that the interaction of the size and grade of enrollment was significant at the .005 level. Exhibits 6-5 and 6-6 illustrate the very powerful interactions of school size and grade of enrollment indicated by the analysis.

Additional data analysis revealed that the sample from one large school had a very large proportion of students entering as sophomores who did not meet either entry requirement. The elimination of these data did not remove the interaction of school size by grade of enrollment regarding admission to the University of California, but did remove it as a factor in predicting admission to the California State Universities. In the latter model, both the effect of size and that for grade of enrollment were significant at the .05 level.

SIZE OF SCHOOL ATTENDED AS A SENIOR	GRADE ENROLLED AT THE SCHOOL ATTENDED AS A SENIOR			
	9TH GRADE	10TH GRADE	11TH GRADE	12TH GRADE
SMALL (Less than 40 seniors)	48 %	54 %	36 %	24 %
MEDIUM (40 to 100 seniors)	41 %	41 %	33 %	22 %
LARGE (More than 100 seniors)	46 %	30 %	50 %	36 %

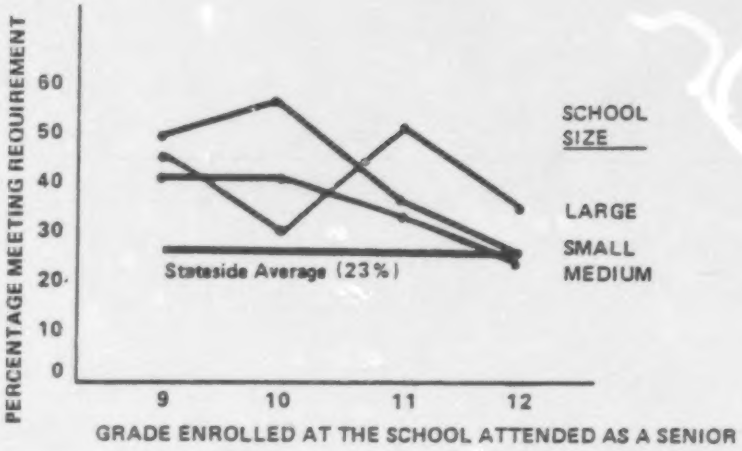

EXHIBIT 6-5

DoDDS SENIORS IN ACADEMIC PROGRAMS: PERCENTAGE OF STUDENTS MEETING THE ADMISSION CRITERIA FOR THE CALIFORNIA STATE UNIVERSITIES

SIZE OF SCHOOL ATTENDED AS A SENIOR	GRADE ENROLLED AT THE SCHOOL ATTENDED AS A SENIOR 9TH GRADE	 10TH GRADE	 11TH GRADE	 12TH GRADE
SMALL (Less than 40 seniors)	18 %	9 %	8 %	8 %
MEDIUM (40 to 100 seniors)	17 %	16 %	12 %	5 %
LARGE (More than 100 seniors)	19 %	11 %	28 %	16 %

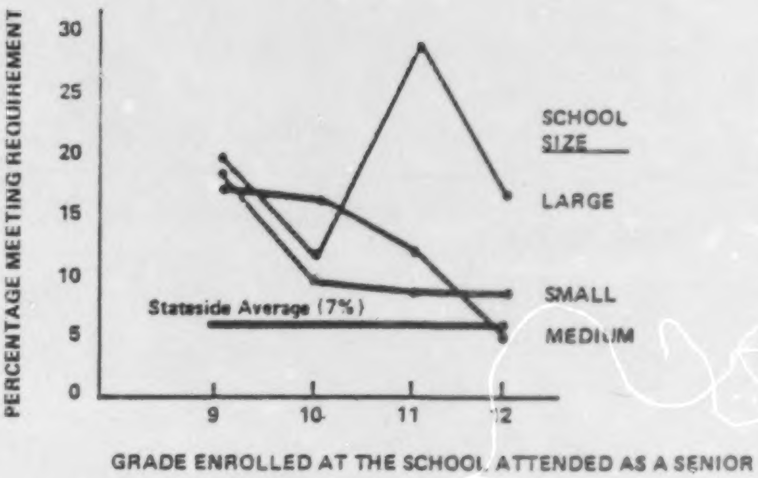

EXHIBIT 6-6

DoDDS SENIORS IN ACADEMIC PROGRAMS: PERCENTAGE OF STUDENTS MEETING THE ADMISSION CRITERIA FOR THE UNIVERSITY OF CALIFORNIA

Despite the interaction effect, we can offer a general interpretation of these results. There is a trend for the percentage of seniors meeting either admission requirement to tend downward towards the stateside average the longer the students spend in stateside schools before entering DoDDS schools: for all size categories of schools, students who enter DoDDS as seniors are less likely to meet the requirements than those who enter in the freshmen year or earlier. Except for the unexplained data for students entering large schools as sophomores, there is a general tendency for large schools to enroll students who are more likely to meet the admission requirements.

It is not clear whether these effects are due to unexplained biases in the allocation of students to schools of different sizes, or to effects of the schools themselves. Since the percentages for students with the longest exposure to DoDDS (those who entered in the ninth grade or earlier) show little variation, we assume that the necessary courses are available at all schools. It may be that the largest schools can be more flexible in providing courses for later-arriving students than can small or medium-sized schools and that this explains the differentials observed among students who entered in grades 11 or 12. Or, it may be that the larger schools received students in those years who were already better prepared. This data base cannot disentangle these possibilities for us.

This analysis raises questions for policymakers in DoDDS: Is there a problem in smaller schools in accommodating the transient student who wants to continue to develop a college preparatory pattern of courses? Are there similar problems faced by students returning to the U.S. from DoDDS schools? DoDDS should examine samples of transcripts and investigate the offerings of schools of different sizes to determine whether the problem is school based or is merely a matter of different cohorts of students being assigned to the different schools. Follow-up of DoDDS students in the United States (e.g., the High School and Beyond Sophomore Follow-Up) would permit DoDDS to assess whether students had problems on transfer back to the states.

SENIORS IN ACADEMIC PROGRAMS--ATTITUDES

Exhibits 6-7 and 6-8 show that DoDDS seniors in academic programs differed only slightly from their stateside peers on several measures of attitude obtained as part of the High School and Beyond Study. Stateside seniors felt that discipline was more effective and that their schools had more school spirit.

SENIORS IN ACADEMIC PROGRAMS--ACHIEVEMENT TEST SCORES

Exhibit 6-9 shows that DoDDS seniors in academic programs outscored their stateside peers on the achievement and ability measures used in the High School and Beyond Study.* Given their additional amounts of schooling, as measured by the numbers of courses completed, this should not be surprising, however. At

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*There were two other tests of ability: Mosaic Comparisons and Picture-Number matches. There is reason to believe that the testing conditions for these instruments were not equivalent in all schools, however.

RATING OF	ESTIMATED PERCENTAGES OF SENIORS THAT WOULD RESPOND EITHER "GOOD" or "EXCELLENT"	
	DoDDS	STATESIDE
Teacher Interest in Students	57.9%	61.8%
Effectiveness of Discipline	38.6%	47.2%
Fairness of Discipline	45.1%	43.2%
School Spirit	43.7%	58.4%

Differences between DoDDS and stateside percentages that exceed 5 percent are significant at the .05 level.

EXHIBIT 6-7

SENIORS IN ACADEMIC PROGRAMS:
SCHOOL-RELATED ATTITUDES

	DoDDS		STATESIDE	
VARIABLE	MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
Self Concept	-.84	7.2	-1.06	6.9
Locus of Control	1.46	5.9	1.92	5.7
Work Attitude	-.50	6.7	-.08	6.2
Family Attitude	.68	6.6	.38	6.1
Community Attitude	.43	6.6	.38	6.7

These measures are scaled composites of other variables that were created by the High School and Beyond Study team. We have multiplied the scales by 10 but otherwise have left the direction of the scales as they were originally. Self concept is scaled negatively--higher negative values mean more positive self concept. Locus of control is scaled such that more positive values mean greater feelings that the individual can influence his or her own destiny. Work attitude has to do with the importance of having a job and making money.

The estimated standard deviation for the DoDDS sample is believed to be conservative (see note to Exhibit 6-2).

All differences between stateside and DoDDS means fall within 95 percent confidence bands around zero.

FIGURE 6-8

SENIORS IN ACADEMIC PROGRAMS:
GENERAL ATTITUDES

TEST NAME	DoDDS MEAN	DoDDS STANDARD DEVIATION	STATESIDE MEAN	STATESIDE STANDARD DEVIATION
Vocabulary Part I (Maximum = 15)	9.63	3.26	8.82	3.25
Vocabulary Part II (Maximum = 12)	7.73	2.60	6.80	2.58
Reading (Maximum = 20)	14.20	3.44	12.90	3.90
Mathematics Part I (Maximum = 25)	19.52	4.33	18.44	4.52
Mathematics Part II (Maximum = 7)	4.90	1.53	4.20	1.62
Visualization in Three Dimensions (Maximum = 16)	9.54	3.20	8.49	3.24

For each of the tests, the difference between the DoDDS and stateside means is significant at the .05 level.

EXHIBIT 6-9

SENIORS IN ACADEMIC PROGRAMS:
SCORES ON ACHIEVEMENT AND ABILITY TESTS

the conclusion of the next part of this section, which deals with seniors in general programs, we will present the results of analyses showing the relationships among background characteristics and schooling on the one hand, and the achievement and attitude outcomes on the other.

SENIORS IN GENERAL PROGRAMS--BACKGROUND CHARACTERISTICS

Exhibit 6-10 shows that DoDDS and stateside seniors in general programs differ on several background characteristics. The DoDDS population has higher proportions of Asians and others. DoDDS seniors in general programs are more likely to have both parents living at home. Once again, much larger percentages of DoDDS seniors enrolled at their current school in grades 11 or 12 rather than earlier. DoDDS seniors were more likely to report being involved in the testing carried out by the High School and Beyond Study (indicating both that they were involved in the tests and that they rarely thought of other things during the testing period).

Exhibit 6-11 shows that DoDDS seniors have slightly higher socioeconomic status [SES], did as much homework each week, watched less TV, and were the same age as their stateside peers.

Comparing all seniors in general programs (Exhibits 6-10 and 6-11) to seniors in academic programs (Exhibits 6-1 and 6-2), it is clear that the differences between the two program groups are much greater than the differences between DoDDS students and stateside students. Seniors in general programs are much more

		ESTIMATED PERCENTAGES OF SENIORS IN EACH CATEGORY	
VARIABLE	CATEGORIES	DoDDS	CONUS
Sex	Male	53.6%	50.0%
	Female	46.4%	50.0%
Race	White	82.1%	83.6%
	Black	8.2%	11.7%
	Asian	2.5%	1.0%
	Other	6.5%	2.7%
	American Indian	0.7%	0.9%
Grade of Enrollment at This School	9	24.1%	59.2%
	10	31.4%	30.9%
	11	23.8%	5.9%
	12	20.7%	4.0%
Parents at Home	None	4.2%	6.3%
	One	20.6%	25.2%
	Both	75.2%	68.5%
Involved with Testing	No	56.7%	66.4%
	Yes	43.3%	33.6%
		(N=671)	(N=7,845)

Differences between DoDDS and stateside percentages exceeding 4 percent are significant at the .05 level.

EXHIBIT 6-10

PERCENTAGED BACKGROUND CHARACTERISTICS OF
SENIORS IN GENERAL PROGRAMS

	DoDDS		STATESIDE	
VARIABLE	MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
SES	-.95	6.8	-1.4	6.6
Homework	4.6	1.3	4.6	1.2
TV Watching	4.1	1.9	4.6	1.7
Age	17.5	.6	17.5	.6

The homework scale is from 1 (no homework) to 7 (more than 10 hours per week). A value of 4 means 1 to 3 hours per week, a value of 5 means 3 to 5 hours per week, and a value of 6 means 5 to 10 hours per week.

The TV watching scale is from one (don't watch TV) to seven (five or more hours per day). A value of two means less than one hour per day, a value of three means between one and two hours per day, and a value of four means between two and three hours per day.

SES is a composite variable made up of indicators of the income and educational levels in the household as well indicators of whether or not certain items were present in the household.

Standard deviations for the DoDDS sample are weighted estimates that do not account for design effects. Separate analyses showed that design effects were very small in the DoDDS version of the High School and Beyond Study. These estimates are believed to be conservative because they are uncorrected for the fact that data were collected on roughly 25 percent of the DoDDS seniors.

The difference between means for TV watching is significant at the .05 level. Other differences are not statistically significant.

EXHIBIT 6-11

AVERAGE BACKGROUND CHARACTERISTICS OF
SENIORS IN GENERAL PROGRAMS

likely to come from lower socioeconomic family backgrounds, do less homework, and watch more TV.

SENIORS IN GENERAL PROGRAMS--COURSES COMPLETED

Exhibit 6-12 shows that DoDDS seniors in general programs tended to complete more courses in basic subjects than their stateside peers. The largest differences were for history or social studies and English or literature. Exhibit 6-13 shows that DoDDS seniors took more courses in foreign languages and more of the advanced mathematics and science courses than stateside seniors. This adds up to a more solid academic program for the typical DoDDS senior in a general program.

Assuming that students in general programs did not generally intend to seek admission to selective universities, but might have wished to be admitted to a state college, we looked at the likelihood that these students would meet the newly promulgated admissions standard for the California State University system. Twenty-six percent of the DoDDS seniors in general programs would qualify by this standard, compared to only 12 percent of stateside students. In fact, a greater proportion of the DoDDS seniors in general programs than of stateside seniors in academic programs would qualify using this standard.

SENIORS IN GENERAL PROGRAMS--ATTITUDES

Exhibits 6-14 and 6-15 show that there are small differences between the two groups of seniors in their attitudes. The largest difference, echoing one found among the seniors in academic

	YEARS COMPLETED		
	1 or LESS	1.5 to 2.5	3 or MORE
Mathematics			
DoDDS	28%	45%	27%
Stateside	37%	42%	21%
English or Literature			
DoDDS	0	6%	94%
Stateside	3%	19%	78%
History or Social Studies			
DoDDS	2%	43%	55%
Stateside	14%	47%	39%
Science			
DoDDS	38%	43%	19%
Stateside	52%	35%	12%

EXHIBIT 6-12

PERCENTAGES OF DoDDS AND STATESIDE SENIORS IN GENERAL PROGRAMS COMPLETING DIFFERENT NUMBERS OF YEARS IN VARIOUS SUBJECTS

	ESTIMATED PERCENTAGES OF POPULATIONS TAKING EACH COURSE	
COURSE	DoDDS	STATESIDE
More Than Three Years of English or Literature	39.2%	25.1%
At Least One Year of a Foreign Language	63.9%	30.5%
Two or More Years of a Foreign Language	32.8%	13.4%
Geometry	59.3%	42.6%
Algebra II	58.8%	34.8%
Trigonometry	15.3%	12.7%
Calculus	3.2%	2.6%
Chemistry	33.0%	24.2%
Physics	16.9%	11.0%

Differences between DoDDS and stateside percentages that exceed 4 percent are significant at the .05 level.

EXHIBIT 6-13

SENIORS IN GENERAL PROGRAMS: PERCENTAGE TAKING SPECIFIC COURSES

	ESTIMATED PERCENTAGES OF SENIORS WHO RESPONDED EITHER "GOOD" OR "EXCELLENT"	
RATING OF	DoDDS	STATESIDE
Teacher Interest in Students	41.8%	46.8%
Effectiveness of Discipline	36.6%	40.5%
Fairness of Discipline	35.7%	33.5%
School Spirit	43.8%	59.0%

Differences exceeding 4 percentage points are significant at the .05 level.

EXHIBIT 6-14

SENIORS IN GENERAL PROGRAMS:
SCHOOL-RELATED ATTITUDES

VARIABLE	DoDDS MEAN	DoDDS STANDARD DEVIATION	STATESIDE MEAN	STATESIDE STANDARD DEVIATION
Self Concept	.45	7.5	.75	6.9
Locus of Control	-.87	6.4	1.07	6.3
Work Attitude	.11	6.1	-.40	6.8
Family Attitude	.06	5.9	-.42	6.4
Community Attitude	-.34	6.2	-.43	6.6

These measures are scaled composites of other variables that were created by the High School and Beyond Study team. We have multiplied the scales by 10 but otherwise have left the direction of the scales as they were originally. Self concept is scaled negatively--higher negative values mean more positive self concept. Locus of control is scaled such that more positive values mean greater feelings that the individual can influence his or her own destiny. Work attitude has to do with the importance of having a job and making money.

The estimated standard deviation for the DoDDS sample is believed to be conservative (see note to Exhibit 6-2).

All differences between stateside and DoDDS means fall within 95 percent confidence bands around zero.

EXHIBIT 6-15

SENIORS IN GENERAL PROGRAMS:
GENERAL ATTITUDES

programs, shows stateside students giving more favorable ratings of school spirit.

SENIORS IN GENERAL PROGRAMS--ACHIEVEMENT TEST SCORES

Exhibit 6-16 shows that DoDDS seniors scored higher than their stateside counterparts on the achievement and ability measures used in the High School and Beyond Study. Again, this is not a particular surprise given that DoDDS students had a much more solid academic course load.

THE PREDICTION OF ACHIEVEMENT AND ATTITUDES

Exhibit 6-17 is the summary of a large number of analyses conducted on the DoDDS and stateside sample of seniors who were in academic programs. In this section we describe the analyses that led to this figure and explain its content.

The purpose of these analyses was to build statistical models that would help us to understand the relationship between student background factors and student achievement test scores and self-reports of attitudes. In the course of these analyses, factors emerged that could not be fully crossed with other factors because the sample sizes rapidly became too small. For example, few nonwhites in the stateside sample changed high schools after the sophomore year. Furthermore, we found that we could not build a statistical model capable of accounting for more than 9 percent of the variations on the attitude measures. Consequently, we focus our presentation on the achievement test scores.

	DoDDS		STATESIDE	
TEST NAME	MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
Vocabulary Part I (Maximum = 15)	6.68	3.21	6.65	2.97
Vocabulary Part II (Maximum = 12)	5.90	2.50	5.21	2.32
Reading (Maximum = 20)	11.94	3.66	10.01	3.95
Mathematics Part I (Maximum = 25)	15.59	4.69	14.20	4.70
Mathematics Part II (Maximum = 7)	3.78	1.57	3.27	1.49
Visualization in Three Dimensions (Maximum = 16)	8.33	3.03	7.37	2.99

For each of the tests, the difference between the DoDDS and stateside means is significant at the .05 level.

EXHIBIT 6-16

SENIORS IN GENERAL PROGRAMS:
SCORES ON ACHIEVEMENT AND ABILITY TESTS

	VOCABULARY			MATHEMATICS	
INPUT VARIABLES	PART 1	PART 2	READING	PART 1	PART 2
SES	+	+	+	+	+
Visualization in Three Dimensions	+	+	+	+	+
Sex	M	M	M	M	M
Race	W	W	W	W	B
Age	-	-	-	-	-
TV Watching	-	-	-	-	-
Homework	+	+	+	+	+
Mathematics Courses	-	-	+	+	+
English or Literature Courses	+	-	*	-	-
At Least One Year of Foreign Language	+	+	+	+	+
Two or More Years of Foreign Language	+	+	+	*	*
History or Social Studies Courses	+	+	+	*	*
Science Courses	+	+	+	+	+
R^2 = Percentage of Variance Accounted For	22%	23%	26%	42%	33%

Variables are listed in the order tested. Each significant relationship indicates that the input variable reached the .025 level of significance when all variables above it on the list were controlled for statistically.

EXHIBIT 6-17

SENIORS IN ACADEMIC PROGRAMS:
PREDICTORS OF ACHIEVEMENT TEST SCORES

This analysis used the combined DoDDS and stateside samples of seniors in academic programs who were either black or white and had entered their schools during or prior to grade 10 (N = 5080).

The symbol M in the row for sex effects indicates that males had higher scores after controlling for all other input variables on the list.

The symbols W (for white) and B (for black) in the row for race, indicate which group had the higher scores when all other input variables on the list were controlled.

+ means a positive relationship, controlling for all other input variables

- means a negative relationship, controlling for all other input variables

* means that the input variable did not reach the .025 level of significance when all variables above it on the list were controlled for statistically.

EXHIBIT 6-17 (cont.)

We felt that the students in academic programs would show more effect of their exposure to schooling, so we limited these analyses to those students. We also found it necessary to use only the two largest racial groups (white and black students) in the samples, because the numbers of "others" were too small to cross with other factors such as sex and type of school (DoDDS or stateside public school). In order to emphasize the differential effects of the type of school, we further limited these analyses to students who had enrolled in the school prior to or during their sophomore year.

We decided to fit a model that would test the contribution of each factor in a step-wise fashion. The ordering of the variables is, therefore, of great importance. The first variables tested were socioeconomic status and ability (the latter was represented by the test of visualization in three dimensions). Then we tested the additional contributions of sex and race to the prediction of achievement test scores. If our knowledge of sex or race did not improve our prediction of the achievement test scores beyond what we could do knowing socioeconomic status and ability, they would be declared nonsignificant.

Then we tested the added contributions of student age, the amount of TV watching and the amount of homework, controlling for the variables previously entered.

Next we entered the variables that measured the amount of exposure to various courses to determine whether they contribute to predicting achievement scores over and above the background factors. Finally, we assessed the added contribution of type of school (DoDDS or stateside public school). If the type of school had made a difference after accounting for the rest of the variables, we would have concluded that the two types of schools have different effects, or that their students differed on other background characteristics we had not measured. However, type of school did not prove to be a significant addition to our model, and we concluded that the difference between DoDDS students' and stateside students' achievement test scores was due to differences in background and exposure to instruction. We have shown that DoDDS students received much more instruction in solid subjects than their stateside peers, and we believe this is the primary reason for their higher test scores.

We also hypothesized interactions of race and sex, type of school and sex, type of school and race, and triple interaction of race, sex, and type of school. None of these proved to contribute significantly to predicting achievement test scores.

Exhibit 6-17 is organized so that the "input" variables are rows, and the achievement test are columns. Looking down a column, which represents one achievement test, we can tell which of the input variables influenced the prediction of that test and what sign each input variable had in the prediction equation. A sign is entered only when the step-wise test for the variable was significant at the .025 level. We believe that the generally strong positive relationship of the numbers of years of subject matter courses to achievement test outcomes, controlling for the other background factors, reinforces our conclusion that the more substantial education in DoDDS is responsible for higher test scores.

Math courses are negatively related to vocabulary test scores, and English and literature courses are negatively related to mathematics test scores. The vocabulary tests may not draw on mathematical terms (so time spent learning them is time directed away from the test's content), and there may be few word or story problems on the math tests. The exact content of the tests is closely guarded so that they may be used in future follow-ups; thus, it is only possible to speculate about these relationships.

The results presented here confirm findings of other authors concerning the relationship of amount of instruction to achievement. (See Keesling and Wiley [1974], Wiley [1976], Keesling [1978], Schmidt [1982], for example). We feel that these results indicate that the students in DoDDS benefit from taking a more academic program than their stateside peers in public schools.

SUMMARY

Data from the national longitudinal study of high school seniors begun in 1980 (High School and Beyond) were reanalyzed to compare DoDDS seniors to their stateside counterparts. Seniors in the DoDDS high schools tended to take more academic course work than their stateside peers. This advantage was reflected in larger proportions of DoDDS students meeting newly proposed admissions standards for certain colleges and universities. However, there was an indication (somewhat obscured by interaction effects) that smaller DoDDS schools had fewer seniors who would meet these standards. It also seemed likely that students who enrolled in DoDDS schools in their senior year would be less likely than others to meet these standards.

The DoDDS seniors scored higher than their stateside peers on all of the achievement measures used in this reanalysis. This difference is related to the differing degrees to which students take academic courses, as stated above.

CHAPTER 7

STAFFING AND STAFF DEVELOPMENT

INTRODUCTION

This chapter encompasses those matters associated with staff who are most directly related to the delivery of education: teachers, principals, specialists, and related support staff. The quality of instructional, administrative, and support staff is critically related to the quality of education.

The quality of teachers affects not only the direct delivery of education in the classroom but also the way that parents and other key groups and individuals view and support the schools. Research and practical experience indicate that the principal plays an important role in the overall effectiveness of the school. A variety of specialists and support staff make it possible for the schools to provide broad-based education services in many areas--career education, academic and career counseling, individual and group testing, and home-school liaisons--and to provide educational services to special needs populations, such as the handicapped.

Data from all sources will be organized and reported as findings in three broad areas: (1) obtaining quality staff, (2) staff development, and (3) recertification and transfers.

OBTAINING QUALITY STAFF

This section looks at the issue of staff quality in DoDDS based on policies, regulations, procedures, practices, and perceptions related to certification standards, identification and recruitment of qualified teachers (and other educators), and assignment of staff according to their qualifications and the needs of students and schools. Reported here are the relevant findings of the surveys, interviews, and case studies conducted as a part of this study.

Certification standards for DoDDS teachers are clearly and explicitly set forth in official DoDDS documents. For example, Overseas Employment Opportunities for Educators, a detailed application brochure for persons applying for DoDDS positions from the United States, spells out specific requirements for all positions according to grade levels, subject areas, and specialty areas (e.g., guidance counselors and dormitory counselors), with the exception of Compensatory Education teachers. The P.L. 86-91 Personnel Guide, a detailed guide for DoDDS managers, provides extensive information on the application of certification standards and the conditions for waiving them. The certification standards for DoDDS educational personnel are fully comparable to such standards stateside, and the limitations on waiving standards for emergency situations are stringent and reasonable.

The case studies document difficulties in grandfathering. Under this practice teachers whose experience has been limited to self-contained classrooms or primarily low functioning students are accepted as qualified resource teachers (i.e., special education) even if they have not been retrained for broadened responsibilities.

In terms of the educational qualifications of DoDDS teachers, 688 surveyed teachers provided the following data regarding their highest level of education: 11 percent bachelor's degree; 28 percent some graduate study; 31 percent, master's degree; 28 percent, courses beyond the master's degree; 2 percent, doctorate degree. Number of years teaching was also requested from surveyed teachers, and the data revealed that 11 percent had been teaching less than 5 years, 29 percent 5-10 years, 19 percent 11-15 years, 17 percent 16-20 years, and 25 percent more than 20 years.

Another point in connection with quality of education is that out of nearly 700 surveyed teachers, only 2 percent reported teaching a grade or subject for which they had no experience or training. Of more than 80 specialists interviewed, 5 percent were not working in their professional areas.

Regulations for filling positions require, first, that positions be filled by transfers on agreements arrived at between principals and regional directors and according to rules governing transfer; second, that positions be filled by hiring locally; and third, that positions be filled by hires processed by ODS from the continental United States [CONUS]. Dependents of federal employees stationed overseas receive preference.

The policy of preference for local hiring is cost effective, permits a principal to move quickly, and is in compliance with DoD directives that military dependents be given employment consideration; however, such a policy tends to limit the immediate applicant pool and deplete the list of substitute teachers. The system for CONUS hires provides selection, with input from some principals, of well-qualified candidates from a broad pool of U.S. applicants. All new teachers have a one-year trial period. Although the regulations state that vacant positions should first be made available to DoDDS teachers who want to transfer, interview data indicate that there is considerable teacher dissatisfaction regarding transfers. The issue of transfer is discussed further in a subsequent section.

With regard to local hires, 46 percent of the principals interviewed said they had no problems with local hires. However, 26 percent said that local hires depleted their substitute teacher list. Fifty-nine percent of the principals said they had some trouble finding replacements in certain subject areas or specialties; of these, 13 percent said that math positions and specialists were difficult to replace.

When asked to compare CONUS and local hires, 67 percent of the principals said there were no differences in their qualifications, while 23 percent said CONUS hires were better qualified, and 8 percent said local hires were better qualified. But of those who said there was a difference, 77 percent said the effect was either none or not much. Thirty-eight percent of the principals said CONUS hires were more experienced; 47 percent said there was no difference in experience levels; and 2 percent said local hires were more experienced. Principals were equally split on CONUS' and local hires' level of involvement in school matters.

The data suggest that there is a general satisfaction among principals with both CONUS hires and local hires, with slightly more favorable ratings for the former. This result reflects positively on the CONUS hiring system, especially since most principals generally do not pick or even see their new teachers until they arrive for their new assignments.

Out of the 684 surveyed teachers from the same schools as the principal interviewees, 30 percent were local hires (21 percent being DoD dependents, and 9 percent being other local hires). Sixty-nine percent were CONUS hires, and the others were substitutes or temporaries.

Handbook for Educators is an orientation booklet for new teachers from the U.S. It provides detailed information to help new teachers on traveling to and adjusting to their first assignment. The procedures for hiring and processing new teachers are designed to ensure that teachers are in place for their new teaching assignments well before the opening of school. It sometimes happens that delayed hiring and inadequate handling result in the after-school-opening arrival of new teachers, which causes initial inconvenience for schools and teachers.

Interviewed CPOs were asked to rate the condition of CONUS-hired personnel folders upon arrival at the overseas post. The mean rating was 2.8, 1 being poor condition, 5 being good condition. Approximately one-third of the CPOs said CONUS hires did not arrive at an appropriate time for processing, and 57 percent of the CPOs said that CONUS hires were not properly prepared upon arrival. Teachers were not fully informed of what to expect regarding living abroad, the importance of such things as ID cards in a military community, and the possibility of encountering delays in securing permanent housing. With regard to the number of late arrivals at a given site, the range extended from 0 to 15 with a mean of 2.2 teachers. The most frequent suggestion for improvement was to increase coordination and communication among all parties concerned.

Principals, when interviewed about their satisfaction with CPO processing of new hires, were split with some leaning toward the positive. Surveyed principals were also asked about the CPO services. The mean principal rating for the quality of CPO processing of CONUS hires was 2.2; the rating for local hires was 2.4. On a four-point scale a rating of two stood for "good" and three stood for "fair." Therefore, surveyed principals also had a slightly positive but basically neutral attitude towards the CPO processing of new hires. New teachers are aided by the personal assistance of experienced DoDDS educators, which facilitates the adjustment process.

STAFF DEVELOPMENT

This section reports findings on data related to the ongoing appraisal and development of staff in DoDDS--policies, regulations, procedures, practices and perceptions of performance appraisal, feedback, instructional leadership, supervision, and inservice.

DoDDS has detailed regulations and procedures in place for performance appraisal and inservice activities (see, for example, "Performance Appraisal Regulations for Principals," September 1981, and the "DoDDS In-Service Education Program," original and revised).

The quality of teachers and instruction in DoDDS can be assessed in several ways. Above average achievment test results on the SAT support a contention that quality teaching occurs in DoDDS. However, the Negotiated Agreement between the Overseas Education Association and Department of Defense Dependents Schools states that "student test results shall not be used in any way to evaluate teachers."

Both principals and parents give high ratings to DoDDS teachers. In interviews, principals rated 15 percent of their teachers as truly outstanding and 45 percent as good, for a total of 60 percent in the top 2 categories. Five percent were rated below average and 2 percent as extremely poor. Surveyed parents graded 18 percent of DoDDS teachers in their community with an A and 40 percent with a B for a total of 58 percent in the top 2 grades. When asked about the teachers of their own children, parents rated 79 percent in the top 2 categories. For both community teachers and their own children's teachers, parents gave failing grades to fewer than 1 percent and Ds to fewer than 5 percent.

Administrators also received good grades from parents. In parent interviews, 48 percent gave administrators in schools of their children a grade of A and 23 percent a grade of B, for a total of 71 percent in the top 2 grades. Surveyed parents were a little less positive about school administrators in their community. Eighteen percent of the parents said they did not know what grade to give, and of those giving a grade, 17 percent gave As and 40 percent gave Bs for a total of 57 percent in the top 2 grades.

Principals Vis-a-Vis Teacher Performance

In DoDDS, as in every system, the principal is designated to play a key role in teacher performance, e.g., supervision, instructional leadership, evaluation via performance appraisals, and inservice. This present study provides data on how principals and teachers actually see themselves in these critical educational roles. These perceptions have an important relationship to how principals and teachers actually function in these roles.

Of the principals interviewed, 20 percent responded that they saw instructional leadership as their main role, while 3 percent saw supervision as their main role. It is likely that the principals who saw their main role as school manager (approximately 50 percent) also consider instructional leadership and/or supervision as an important role. This contention gains support from principals' responses to the questions about time spent in various roles. With regard to instructional leadership, 52 percent rated it as the first, second, or third role in terms of actual time spent. Similarly, 54 percent rated supervision in 1 of the top 3 time slots.

Almost 45 percent of the interviewed principals said they spend from 27 to 50 percent of their time in instructional supervision. Regarding time available for supervision, almost 75 percent said that such time was insufficient; 65 percent said ideally they would like to spend 50 to 75 percent of their time in supervision.

More than 100 principals responded to survey questions on the topic of time allocated to various activities. Forty-five percent of the principals reported spending more than 25 percent of their time on educational management and organization (scheduling, designing new instructional organization patterns, pupil discipline, classroom management, personnel, etc.). Thirty-eight percent spend more than 25 percent of their time on curriculum and instructional leadership (observing classrooms, supervising teaching, coordinating curriculum study, planning/providing staff inservice, etc). Nearly 70 percent of the surveyed principals indicated they should spend *more* time on curriculum and instructional leadership, whereas, nearly half felt they spent the *right* amount of time on management/organization.

In summary, it is not surprising that surveyed and interviewed principals report that they spend their time in similar ways--primarily school/educational management and instructional/curriculum leadership. Significant numbers of principals felt insufficient time is spent on observation, supervision, and related instructional activities.

A 1981 national survey of principals* reported a similar situation stateside. In terms of the amount of time spent on major functions, elementary principals reported being able to spend only 30 percent of their time on instructional leadership activities, middle and junior high school teachers 25 percent, and senior high school principals only 20 percent of their time in this area. The bottom line of the situation stateside was summarized as follows: "Today's principals are not, and cannot be, 'instructional leaders' in the conventional sense . . . . The PHD [Piled Higher and Deeper] phenomenon continues while the principal's responsibilities become more complex and more reactive than proactive. As a result, innovative instructional leadership is shelved and replaced by the realities of personal survival and crisis management." Since this national survey indicates that elementary and senior high school principals spend only 10 percent of their time on instructional supervision, and junior high school principals 25 percent of their time on supervision, principals in DoDDS appear to be spending, on the average, slightly more time in supervision and instructional leadership than their stateside counterparts.

With regard to principal supervision, 20 percent of teachers interviewed said they had no professional interaction with principals in supervision; 22 percent reported they received informal observations; 24 percent indicated that principals gave advice and recommendations; and only 7 percent said they received significant advice after observations. Thirty-six percent mentioned that principal supervision was useful or very useful, while 24 percent said it was not useful. When asked about their satisfaction with policies on supervision, 37 percent of teachers interviewed expressed satisfaction, 26 percent expressed dissatisfaction, and 35 percent had no opinion.

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*Bruce Howell, "Profile of the Principalship." Educational Leadership, January 1981, 38:4:333-336.

In a parallel series of questions, over 600 surveyed teachers also provided data on supervisory interactions with their principals. Sixty-eight percent reported that principals visit their classrooms twice a year or less. One half of the teachers indicated that their principals do not work with them on improving or expanding their teaching skills, and 35 percent said this happens once or twice a year. According to surveyed teachers, the most frequent principal-teacher interactions are on the subject of management of instructional programs, school-level curriculum development, and classroom management/pupil discipline; however, about half the teachers say these types of interactions occur only once a year or never. Demonstration and information regarding new methods or materials reportedly occur less frequently then the principal-teacher interactions just described. When teachers were asked how important it is for their principals to provide them with instructional/curriculum direction, 65 percent responded somewhat or minimally important. Twenty-seven percent said very important.

Nearly 700 surveyed teachers were asked about the services provided by regional coordinators. Twenty-three percent of the respondents indicated that these coordinators help them with modification of materials, 14 percent receive consultation regarding specific students, 14 percent receive advice on student testing and evaluation, and 9 percent have had demonstration lessons in their classrooms by regional coordinators.

Performance Appraisal

The performance appraisal system is designed as a systematic method for evaluating teachers and providing quality control feedback, supervision, and inservice. When asked about the performance appraisal system for teachers, 51 percent of the principals interviewed said they had no problems with it, while 46 percent said they did have problems. Of the latter, the most often-mentioned problem was difficulty in writing standards in measurable terms. When asked how the process might be improved, answers were scattered, with the most frequent single answer being a standardization of the process for all teachers.

Surveyed principals were asked to describe the accuracy of the performance appraisals in measuring the performance of staff at their schools using the following ratings: 1--very accurate; 2 --somewhat accurate; 3--neither accurate nor inaccurate; 4--somewhat inaccurate; and 5--very inaccurate. The mean rating given by over 100 principals was 2.2, indicating that performance appraisals are felt to be only slightly accurate. When asked to rate the extent to which objectives in teachers' performance plans are measurable, the mean rating was 2.8 on a scale of 5 (1--to a very great extent; 5--not at all). This rating suggests that principals have some problems measuring teachers' objectives. Surveyed principals also reported that to some extent they find the performance appraisal process useful for informing them of individual inservice training needs.

Of teachers interviewed, almost 43 percent said performance appraisals were accurate in measuring their performance; but 31 percent maintained they were not accurate. Thirty percent of the teachers indicated that performance appraisals did not help them reach their objectives as teachers, although 18 percent said the appraisals did help. Fifty-two percent had no opinion. Performance appraisals did not help with identifying inservice needs, according to 58 percent of the teachers, 10 percent said the appraisals did help, while 32 percent had no opinion. When asked about the negative aspects of their jobs, 10 percent of the teachers interviewed rated performance appraisal as the number 1 negative aspect.

Policy statements indicate that inservice training is a high priority in DoDDS. An annual survey of inservice needs, coordinated at the regional level, is a requirement. Of the principals interviewed, 41 percent said they determine inservice needs by way of a survey; however, responses from both interviewed principals and teachers indicate that direct communication between teachers and principals is the dominant mode for determining inservice needs. Fifty-four percent of principals said that local inservice needs were teacher generated, and 66 percent of teachers said that they communicate personal inservice needs to their principals directly, either face to face or by phone. DoDDS has drafted and will field test, during school year 1983-84, a data-based staff development system designed to identify specific individual needs related to teaching assignments.

A large majority of teachers said they were involved with inservice activities sponsored by ODS (40 percent) or region (64 percent) and university courses (42 percent). Of those responding to questions regarding the quality of inservice, a large majority rated inservice as beneficial, with high ratings being given to ODS workshops and university courses. Regional workshops were rated as beneficial by 56 percent of the teachers and not beneficial by 18 percent. When asked about policies on staff development, 24 percent of teachers interviewed expressed satisfaction, 28 percent dissatisfacation, and 42 percent neither. Teachers and specialists had a difficult time determining whether an inservice was offered under the auspices of ODS, the region, or local personnel.

Surveyed teachers were asked to rate the range of staff development opportunities available to them through DoDDS on a scale of 1 to 5, 1 being poor and 5 being excellent. The mean rating given by over 650 teachers was 2.5, indicating a somewhat negative opinion about the range of opportunities. The mean rating for quality of staff development opportunities was 2.6 on the same scale, also a less than positive score.

Teachers were also surveyed about their specific inservice needs. According to approximately 600 teachers, the 5 areas of highest need are new methods, new materials, computer science, talented and gifted, and individual problems. The five areas of lowest need are music, art, math, Compensatory Education, and ESL. Overall, teachers reported their inservice needs to be moderate, a three on a scale of five.

Interestingly enough, surveyed principals identified very similar high and low inservice needs for their teachers. The only differences were the inclusion of program management as a high need, replacing dealing with individual problems; and the inclusion of reading and writing as low needs, replacing Compensatory Education and ESL. Overall, principals rated their teachers' inservice needs as slightly higher than the teachers rated their own needs.

When specialists were interviewed regarding their need for additional training to better serve the children assigned to them, nearly 75 percent of the 61 interviewees said they needed more training. Specifically, 33 percent required an update on instructional practices/techniques, 25 percent needed information on current/recent research in their specialty areas, and 21 percent wanted testing/assessment/evaluation information.

Specialists were also asked if teachers needed inservice training in their specialty areas, and 79 percent said yes. Specifically, 35 percent of the interviewed specialists believe educators need information about their programs or services (scope and goals), 28 percent believe teaching/instructional techniques are needed, and 26 percent said educators need information about the nature of the specific disability/ability with which the specialist deals.

When principals were asked to evaluate possible ways for improving teachers' skills, summer training in the states received the highest mean rating (3.9 on a 5-point scale, 5 being very good and 1 being poor). The following were given ratings of 3.5 to 3.7: DoDDS-sponsored inservice, courses or training overseas, supervision and evaluation of teachers, and help from peers or master teachers.

In regard to their own professional development, 97 percent of 116 responding surveyed principals reported attending a regional meeting for school level administrators in the last 2 years. Half of the principals had attended a stateside convention in the past two years. Principals rated both these types of meetings as valuable. Only 5 percent of the surveyed principals reported not reading a professional journal regularly.

As to the most negative aspects of their jobs, the top-rated item was lack of opportunity for further education (as differentiated from lack of inservice opportunities, which was a separate item). Forty-three percent rated lack of educational opportunity as either the first, second, or third most negative aspect of their jobs (only 24 percent rated lack of inservice in the top 3 negative aspects). This finding is expected because DoDDS schools are located throughout the world and removed from the usual opportunities that allow teachers to easily pursue further training through evening and weekend studies at nearby universities.

RECERTIFICATION AND TRANSFERS

Data from the teacher survey indicate that nearly 80 percent of teachers are satisfied or very satisfied with their overall DoDDS experience, and 77 percent are satisfied or very satisfied with their current position. Nearly 80 percent of principals reported that in the year prior to the study, no teachers or specialists left before they completed their minimum tour of duty.

Thirty-one percent of the teachers interviewed rated living and teaching abroad as the number one element in job satisfaction. When the number 2 and number 3 ratings for living and teaching abroad are added, the cumulative percentage rise to 77 percent. There is little wonder then that the opportunity to transfer among sites abroad is an important element in teacher satisfaction. DoDDS has a specific set of regulations governing transfers in which seniority and service in hardship sites, when balanced with school system needs, are taken into account. Staff in desirable locations generally elect to remain; therefore, openings to accommodate transfer requests may not be available.

When asked about how transfer policies affected them, 15 percent of teachers interviewed said policies have a negative effect on morale, 21 percent stated that transfers were difficult to get, and 46 percent indicated they were not affected at all.

But when asked about transfer policies across regions, 35 percent said they were very dissatisfied, and 16 percent maintained they were dissatisfied, yielding a cumulative dissatisfaction rating of 51 percent. Only 7 percent said they were satisfied or very satisfied. The major reason teachers gave for their dissatisfaction was the difficulty getting a transfer. However, when teachers were asked if they currently wanted to transfer, 60 percent said no and 33 percent said yes. It appears that transfer policy dissatisfaction is greater than actual transfer dissatisfaction, although the latter is not trivial.

In light of teachers' sentiments about transferring and transfer policies, the length of time teachers have been in their present schools and regions should be considered. Fifty-five percent of the more than 675 surveyed teachers had been in their present region 5 years or less, and 11 percent were in their first year. Thirty-three percent had spent 6 to 15 years in the same region, 11 percent 16 to 25 years, and 1 percent more than 25 years.

Of principals interviewed, 69 percent said either they had no problems with inter-regional or intra-regional transfers or they made no response about problems. When asked about the factors that influence transfer assignments for teachers, the top three factors given by principals were student and personnel population shifts, the point system, and special talents.

Surveyed principals were asked how long they believed teachers should stay in one school. Out of the 110 principals responding, none said 1 or 2 years. Sixty-six percent responded 3 to 5 years, 12 percent 6 to 10 years, and 22 percent selected "unlimited" as a response.

When asked how teachers would respond to a policy of mandatory reassignment across schools, principals reported that teacher morale would be affected only somewhat negatively. However, according to principals, the effect of such a policy on level of teacher performance and community relations would be neutral to somewhat positive. The process of educational renewal and change would be affected positively by such a policy, but not strongly.

In terms of principals themselves, 59 percent of those surveyed reported that 3 to 5 years is the optimum time in 1 school. Seventeen percent responded 6 to 10 years, 24 percent "unlimited," and nobody said 1 to 2 years. Seventeen percent of those principals had been in their schools 1 year or less, 51 percent 2 to 5 years, 19 percent 6 to 10 years, and 12 percent more than 10 years.

DoDDS has regulations for a recertification program that requires all educators to meet recertification standards every six years. According to principals interviewed, 85 percent were of the opinion that recertification responsibility had been delegated to them, and 65 percent felt qualified to handle the responsibility. Twenty percent expressed a need for training in recertification, and 18 percent expressed a moderate or great need. Eighty-five percent of the principals said that DoDDS should have its own recertification requirements, with 28 percent basing this on the uniqueness of DoDDS. Twenty percent expressed the complementary need for continuity of standards with stateside requirements. Only one respondent said there should be no recertification for principals.

Sixty-four percent of the principals said that the grade/class classification of DoDDS principals was very inequitable. Currently, classification is based on three weighted factors: student load, variety and complexity of instructional activity, and level of responsibility. Among the criteria suggested by principals for classification are size of school (i.e., student load--56 percent), experience (46 percent), academic credentials (or currentness--36 percent), and performance (38 percent). Apart from concerns about possible favoritism/cronyism in selection and promotion, respondents may have been questioning the designation of some small school principalships for GS-13 ratings, while a number of large schools have received GS-12 ratings.

Principals' Classification by School Size

School Size	CL-II	CL-III	GS-11	GS-12	GS-13
1-125	2	18	10	5	0
126-300	1	4	8	25	1
301-500	0	0	2	41	1
501-1000	0	0	0	64	25
>1000	0	0	0	7	21

CONCLUSIONS AND RECOMMENDATIONS

Policies and Practices for Obtaining Quality Staff

The first set of issues examined in connection with the quality of educational staff embrace all those policies, practices, and perceptions associated with obtaining and assigning such staff. It is clear that to ensure quality instructional, administrative, and support staff, DoDDS, like any school system, must have in place an adequate set of professional standards for educational staff and apply these standards in an effective manner. As noted above, DoDDS has formal certification standards for all educational personnel comparable to stateside standards. In addition, data from this study indicate that teaching staff have respectable levels of experience and education.

It might be argued that the generally unspecified 18 credit hours of professional teacher education required of prospective teachers could be sharpened by the introduction and periodic review of specific studies in essential pedagogical topics and contemporary special demand areas (e.g., reading, human development, computer literacy, handicapping conditions). On the other hand, these general requirements give DoDDS reasonable flexibility in hiring and do not burden well-qualified candidates with narrow requirements. In addition, the general requirements in professional teacher education are complemented by other requirements that strengthen quality standards, such as specificity of studies for various grade levels and subject areas, and the requirement that professional educational studies and student teaching must be in an approved program, a requirement that raises the likelihood of adequate pedagogical preparation.

The regulation requiring that positions be filled first by transfers, second by local hires, and only then by CONUS hires, appears, according to the judgment of principals, to have minimal negative effects on teacher quality. The data indicate that principals overall have a slightly higher opinion of the professional qualifications of CONUS hires and believe them to be more experienced. In addition, principals are concerned that local hiring depletes the list of substitute teachers. This result is expected since local hiring draws from a much smaller pool of applicants. It is true that regulations stating that professional standards cannot be waived for local hires, except in emergency situations and for a limited period of time, ensure the hiring of at least minimally qualified persons. However, the initial restrictions on the applicant pool (including a preference for dependents) does not allow for choosing the "best" among many qualified applicants. This limitation of the local hire preference must be weighed against the cost of a more open hiring system. It can also be asked, in view of principals' general satisfaction with local hires, whether significant additional educational benefits would be gained by more open hiring, especially when weighed against potential costs. It should be noted that data from this study indicate that 30 percent of the present full-time teachers are local hires.

The data indicate that the CONUS hiring system is generally effective in obtaining qualified teachers, especially as rated by principals. Given the immense geographical distribution of schools and the importance that principals place upon their involvement in hiring teachers, it is no small achievement that CONUS hires are not only qualified but also generally meet the expectation of principals to whose schools they are assigned. It is to DoDDS' benefit to continue to support and strengthen the CONUS hiring procedures, practices, and schedule for the effective involvement of and communication among key actors in obtaining high quality new staff.

Responses by both CPOs and principals suggest problems in the overseas processing of new hires. DoDDS provides fairly complete general orientation information for new hires; however, it would be beneficial if more specific orientation information on each locale were also available. With regard to overseas processing of new hires, the rather widespread dissatisfaction by CPOs with CONUS folders and the preparation of CONUS-hires suggests that continued attention to these details is in order. Also, communication between CPOs and appropriate ODS officials regarding new hires should be examined. Some dissatisfaction by principals with CPO processing also supports the suggestion that the chain of processing events leading to a new assignment requires attention from beginning to end.

An interesting alternative to DoDDS' current recruitment stragegy exists in the Canadian Armed Forces schools. To staff their overseas schools, the Department of National Defence [DND] depends upon the assistance and cooperation of Canadian school boards that are willing to nominate interested members of their staff as candidates to enter into a tripartite loan-of-service agreement with DND if they are selected for assignment. Selected candidates serve for an initial period of two years, during which time, for all intents and purposes, they remain employees of the sponsoring board. The board continues to pay basic salary and associated benefits and bills DND monthly for reimbursement. Staff members are reinstated with the board on termination of the loan-of-service. During this past year over 2,000 applications were received from Canadian teachers and administrators for the approximately 150 advertised vacancies. In contrast to DoDDS' current practice, all interviewing and selection of teachers is done by phone; only principals and supervisors are interviewed face to face.

DoDDS should consider experimenting on a small scale with this alternative recruiting/staffing mechanism. Apart from the obvious benefit of enlisting personnel with new ideas and perspectives into the system, we believe that the relationships formed between these recruits and DoDDS teachers during their brief overseas tenure would enhance the possibilities for current DoDDS teachers to rotate to teaching positions back in the United States.

The effect of this policy, if eventually expanded to include all CONUS hiring, would be to reduce "tenuring in" among DoDDS teachers and administrators, create additional inter- and intra-regional transfer opportunities, and facilitate eventual re-entry of DoDDS personnel to available positions in the United States.

Staff Development

The second set of issues examined in connection with the quality of educational staff was the evaluation and professional development of DoDDS staff. A first basic question here is, "How are DoDDS teachers rated by principals and parents?" The answer is that teachers received very good ratings by both groups. Since principals play the key role in teacher evaluation, supervision, and instructional leadership, their ratings of teachers must be weighed seriously. The opinions of parents are important as a measure of satisfaction with the education that their children are receiving and the amount of support they are likely to give the schools. The strongly favorable ratings given to teachers by both principals and parents speak to the generally good education offered in DoDDS.

On the other hand, it cannot be overlooked that a few teachers were rated as below average or even failing. While it is inappropriate to make a judgment about the total DoDDS system from these few cases, the fact that these very poorly rated teachers may be adversly affecting the education of a number of children must be addressed. The identification and remediation or dismissal of such teachers deserve attention.

A second basic question with regard to staff appraisal and development is, "How well do principals function in their critical roles as instructional leaders, supervisors, and evaluators?" The data in this study strongly suggest that DoDDS principals, like other principals, consider themselves as overall school managers with many and diverse demands on their time. This professional self-perception is in line with the complexity of most modern schools. This reality certainly must be taken into account when considering the role of principals as instructional leaders. However, the multifaceted role of the principal, with its many demands, should not be used as an argument to slight the principal's role as an instructional leader. Instructional leadership and supervision, in conjunction with teacher appraisal and feedback, are key principal roles related directly to the main task of the schools, namely, delivery of quality education.

While most principals do rate *manager* as their main role, there is considerable support for the importance of the roles of instructional leader and supervisor. Not only do principals rate these roles as important, they also indicate that they devote a considerable amount of time to them and would like to devote more. Given the level of support for and investment in these instructional support roles, it would be reasonable for DoDDS to build on this interest with increased training for principals. Effective functioning in these roles is a critical aspect of the overall managerial leadership that principals must provide in their schools.

This recommendation for principal training is further supported by the far less positive assessment that teachers gave principals for supervision and instructional support. These ratings by teachers suggest a gap between what DoDDS (and its principals) desire in instructional leadership and supervision and what is actually happening. Another finding that suggests such a gap is that when asked what DoDDS could do to help principals become more effective supervisors, 49 percent said they wanted more time for supervision and less for administrative work, and 24 percent asked for more training.

The DoDDS principal's role as an evaluator of teachers is guided by the relatively new performance appraisal system. Reevaluation of professionals is not easy under any circumstances. Given the complexities and subtleties of teaching and related educational tasks, the difficulties of specifying standards of measurement, and the relative newness of the performance appraisal system in DoDDS, there is little wonder that the findings reflect mixed results thus far with the system. It would be inappropriate at this point to interpret these results as support for radical changes in the system. On the contrary, it can be argued that the system itself represents a major step toward formalizing and strengthening evaluation and feedback. What the results do indicate is that the system requires sustained and joint attention by principals and teachers. With a substantial number of principals indicating they had problems with the system and an equally substantial number of teachers reporting that the system was not helpful or resulted in inaccurate ratings, it is recommended that DoDDS take organized action to improve the understanding, acceptance, and operation of the system.

A third basic question about the development of quality staff is, "How effectively does the DoDDS inservice system work?" As noted above, inservice is a high priority policy matter in DoDDS. While it is not clear that formal procedures for an annual survey of inservice needs are fully operational or effective in all regions, it does appear that a large majority of teachers are participating in some form of inservice, and many of the participants considered inservice experiences as beneficial. However, a fairly substantial number of teachers who expressed dissatisfaction with DoDDS policies on inservice (28 percent as contrasted with 18 percent who said regional inservice workshops were actually not beneficial) and negative opinions about the range and quality of inservice opportunities indicate that staff inservice training in DoDDS should be examined closely. Teachers may be expressing a desire for a clearer and/or more definitive role in specifying inservice experiences.

The inservice needs assessment incorporated into the teacher and principal surveys resulted in some fairly specific information regarding teachers' self-perceived needs and principals' perceptions of teachers' needs. As mentioned previously, both teachers and principals identified the following as areas of high inservice need: new methods, new materials, computer science, and

Talented and Gifted. In light of this concurrence, DoDDS might seriously consider inservice opportunities in these areas.

The 1981 report by the Department of Education on DoDDS indicated the existence of key problem areas with inservice education that stem primarily from the geographic dispersion of DoDDS and from funding difficulties:

- Lack of clear budgeting for inservice needs and a policy to commit funds as budgeted
- Severe limitations on travel and per diem
- Remoteness of some overseas staff and duty stations from college and university training opportunities
- Problems with staff turnover

Key problem areas remain. Interviews and case studies done on the school and regional level indicate the existence of more subtle difficulties in assessing current inservice practice. Some inservice which received high ratings from staff had little or nothing to do with enhancing staff understanding and skills of the educational program, e.g., CPR (cardiopulmonary resuscitation). Ratings were at times very low ("a total waste of time") for important inservice areas like dealing with handicapped children. The lack of travel funds prevents regional coordinators from acting as in-house consultants for local staffs, although many of the teaching staff questioned the qualifications of regional curriculum coordinators to act in such a capacity. Another problem area, that of the equitable availability of inservice training, was subject to problems which included both ODS and the region offering essentially the same inservice, but if a teacher was lucky enough to attend the ODS inservice, all of their expenses were paid. If the teachers attended the regionally sponsored inservice, they had to pay their own travel and expenses.

The surveys of inservice needs are used to help pinpoint areas of concern for staff development activities. Case study interviews brought up two caveats which should be noted in relation to the way this information is used:

- Once priorities are set, budget restrictions severely limited the provision of inservice training: only the very few topics at the top of the list, and those which coincide with inservice training associated with the five-year curriculum development cycle, are addressed.
- When new and complex programs are introduced (Special Education, Compensatory Education, ESL Education, Gifted and Talented Education, etc.) with which teachers and principals have had no previous training or experience, and there is no detailed written information available from ODS and/or the Regional Office, staff on the local level may not know enough to know when they need specific types of training.

Specialists as a group expressed a desire for more training themselves and for teachers in their schools. The most important training teachers need, according to specialists, is information about the specialty programs--their scope and goals. Perhaps specialists could provide short inservice yearly for the schools they serve on the nature of their programs and specialties.

DoDDS has developed a School Improvement Program [SIP] which will be piloted during school year 1983-84 in two elementary schools and one high school. The SIP design calls for goal setting and staff development in the areas of school and classroom climate, as well as in the instructional program. If successful, this program will more accurately identify and provide for inservice needs.

In order to pinpoint inservice needs and to validate inservice training DoDDS currently is implementing a system of performance-based evaluation based on classroom observation of the teacher by the principals; data obtained from the appraisals will be used in determining inservice needs.

Related to inservice is the finding that the lack of opportunity for further education (as differentiated from lack of inservice opportunities) was the teachers' top-rated negative job aspect. This finding leads logically to the recommendation that DoDDS should explore additional ways to offer more university course opportunities to their teachers, both overseas and in the United States.

As discussed previously, the data suggest that principals could benefit from training designed to enhance their instructional support roles. However, principals do seem to have adequate opportunities to exchange ideas with their peers at regional and stateside meetings, and an overwhelming percentage of principals read a professional journal regularly, which presumably keeps them abreast of current issues in administration.

Recertification and Transfers

The third set of issues deals with maintaining quality educators through recertification, appropriate transfers, and related job satisfaction. Recertification is an issue directly related to maintaining updated professional standards in DoDDS. Transfer policies and practices also relate to continuing quality among and within regions and also have an important bearing on job satisfaction. This latter issue of transfer and job satisfaction is clearly reflected in the findings reported previously. It appears that most teacher dissatisfaction related to transfers are due to a perception that transfers are difficult to get, not with the transfers themselves. Both teachers who presently want to transfer (approximately one-third), and those who do not, perceive transfers as unattainable. Since DoDDS policy rightly gives priority to system needs in the matter of transfer, while secondarily attempting to accommodate the requests and perogatives of teachers, it is unlikely that a perfect accommodation is possible. It appears that dissatisfaction with the transfer system may come at the point where school system requirements conflict with individual desires, since 68 percent of teachers have been in their schools and 55 percent in their regions 5 years or less. Given a situation such as this, it is necessary that administrative leaders talk to teachers about all factors related to transfer.

An attempt should be made to have teachers accept a share of responsibility in the problems, as well as the advantages, of transfer policy and practice.

Recertification is a relatively new process in DoDDS. Since the recertification standards are an important quality control measure taken by DoDDS and deserve to be continued, open and timely dialogue among administrative leaders and teachers on the issue is required to prevent misunderstandings and/or tension.

In regards to principal classification, a strong majority of the principals believe that implementation of the present system is inequitable. Principals talked about the "old boy/girl" network being more important than nature or length of principal experience. The data indicate that the procedures for classifying and re-classifying principals should be carefully examined in the near future.

The overall picture in the staff and staff development area is one of substantial and broad strength, with some special need to continue strengthening the instructional leadership role of principals, the performance appraisal system, and the recertification process, with additional general attention to administrative leadership in effective communication with teachers on special areas such as inservice, continuing education, and transfers.

CHAPTER 8

THE PHYSICAL ASSETS OF DoDDS

INTRODUCTION

This section of the report addresses the physical aspects of the school system, the facilities, the manner in which they are built and maintained, and the supplies and equipment that go into the building for daily use in the educational program. The physical plant currently supporting the school system is first reviewed from the perspective of independent evaluators, school staff, students, and parents. What these data indicate are an aging plant with accompanying heavy demands for maintenance and repair. The second major section in the chapter analyzes the major construction program that DoDDS instituted in the 1979 fiscal year to modernize and upgrade the school facilities. This is followed by a review of the minor construction, maintenance, and repair program as it is operating at the local level with the support of the military services. The final aspect of the system's physical assets studied is that of supplies and equipment. This chapter ends with a summary and recommendations pertaining to operation of these programs.

CONDITION OF THE DoDDS INFRASTRUCTURE

DoDDS offers some showcase facilities, possibly best exemplified by Zama High School in Japan, designed under the auspices of the Army Corps of Engineers and recipient of the American Institute of Architects' 1981 National Architect Award of Merit.

Recent NCA evaluation teams visiting newly constructed schools report finding exciting facilities for young people. On the other hand, there is the school permeated by the odors of the nearby pig farm, the school with lavatories separate from the main building, and the five-story warehouse converted to school purposes.

When DoDDS was established in 1978, it took responsibility for a school plant that had previously been in the purview of the military services. Data collected shortly after the transfer indicate that among the schools in the representative sample, 57 percent of the rooms in these buildings were built in the 1950s or earlier. New construction in the 1960s contributed to the 13 percent of the structures' being 2 decades old. During the 1970s further military-sponsored construction accounted for the 30 percent of the physical plant facilities that were an average of 10 years old. Exhibit 8-1 provides a detailed breakdown of the overall age of the rooms in DoDDS facilities shortly after the transfer.

At the time of data collection one building that represented 5 percent of the rooms built in the 1950 to 1959 period had been totally replaced. Three buildings in the representative sample had received authorization for major construction projects, and an additional six schools were involved in planning for major construction. Upon completion of all 4 projects, 10 percent of the student capacity of the schools in the sample will be in facilities built since 1979.

YEAR OF CONSTRUCTION	ALL ROOMS	PURPOSE OF ROOM EDUCATIONAL	 AUXILIARY
Pre-1940	3%	2%	4%
1940-49	2%	2%	3%
1950-59	52%	50%	55%
1960-69	13%	15%	11%
1970-79	30%	31%	27%

EXHIBIT 8-1

YEAR OF CONSTRUCTION OF ROOMS IN SCHOOL FACILITIES WHEN TRANSFERRED FROM MILITARY SERVICES TO DoDDS

Tours of school facilities planned by those in the field can result in conjured images of a system comprised of Butler buildings, converted stables, and warehouses. The 1980 data for the representative sites provide evidence of the presence of these facilities; however, they are the exception (Exhibit 8-2). In 1980, prefabricated structures housed 9 percent of all DoDDS rooms, with more than half of these being prefabricated structures designed for use as school buildings. Adjusting these data for completed new construction, the proportion of the buildings that are prefabricated has been reduced by DoDDS to 7 percent. DoDDS does have its fair share of converted structures, with 2 out of every 10 rooms housed in a building designed for a purpose other than that of a school.

The facilities visited are located on sites ranging in size from 1 to 35 acres, with a median acreage of 4. Exhibit 8-3 provides a comparison of average stateside acreage requirements for school sites among the 38 states having such requirements with actual mean site size among DoDDS schools in the representative sample. The means suggest that DoDDS compares favorably at the elementary level. However, a few schools on particularly large sites account for this. Less than 20 percent of DoDDS schools at all levels are on sites of the size recommended for stateside facilities. Data are not available that would allow a comparison with currently occupied stateside schools, nor is the number of stateside construction projects having received waivers from acreage requirements known.

		PURPOSE OF ROOM	
	ALL ROOMS	EDUCATIONAL	AUXILIARY
School Design	83%	84%	81%
Masonry/Wood	78%	78%	79%
Prefab	5%	7%	2%
Other Design	17%	16%	19%
Masonry/Wood	13%	12%	14%
Prefab	4%	3%	5%

EXHIBIT 8-2

DISTRIBUTION OF ROOMS IN DoDDS SCHOOL FACILITIES WHEN TRANSFERRED FROM MILITARY SERVICES BY TYPE OF CONSTRUCTION

	MEAN ACRES PER SITE		
SCHOOL LEVEL	STATESIDE MINIMUM REQUIREMENT*	DODDS SAMPLE ACTUAL**	PERCENT OF DoDDS SCHOOLS BELOW STATE-SIDE AVERAGE
Elementary	7	7	76%
Junior High/Middle	16	9	80%
High School	23	11	75%

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*Source: "State Requirements Survey for School Construction K-12, 1981." State Requirements Survey Task Force, American Institute of Architects.

**Source: DoDDS 1980 Survey of School Facilities, representative sample sites.

EXHIBIT 8-3

COMPARISON OF ACREAGE REQUIREMENTS FOR
STATESIDE AND DoDDS SCHOOL SITES

The location of schools on small sites is not a matter of policy. DoDDS' current guidelines recommend acreage that compares well with stateside acreage. However, siting of facilities, addressed later in this report, is one of the major obstacles encountered in construction programs.

Overall, the data suggest DoDDS is not making maximum use of the space available. In the fall of the 1981-82 school year, enrollment at the representative sites was at 84 percent of capacity. However, 3 out of 10 schools had enrollments exceeding capacity, on average by 30 percent. All but one of these overutilized facilities had been built in the 1950s or earlier. One third of these have since received authorization to proceed with major construction. Generalizing from these data, slightly more than 1 out of every 10 schools is aged and overcrowded yet not authorized to engage in major construction. This suggests a need for a continuing aggressive major construction program.

Ratings of the School Facilities

Data collectors were requested to rate various aspects of the school plants they visited. Given the few days they spent on site, only the most obvious features of the buildings were rated. What does result is a cursory description of the facilities. The reports are generally favorable and are corroborated by reports from the principals and teachers who are familiar with the facilities. At a number of the sites visited, data collectors found rating difficult, since different parts of the facility were constructed at different times and represented extremes on the scale.

The grounds of the schools, tended under support agreements with the military, are well cared for at 8 out of 10 sites. The exterior of buildings also provides a positive impression overall. Only one-quarter of the sites were reported to evidence some decay, and none were rated as dilapidated. On the inside, the building floors were reported to be clean and the walls and ceilings in good condition. Exhibit 8-4 summarizes selected aspects of the ratings of school facilities as reported by data collectors.

Perspective of Those in the Schools Daily

The opinions of principals, teachers, and students in grades 5 through 12 were requested regarding the physical condition of specific aspects of their schools' physical plant (Exhibit 8-5). Overall the ratings were on the satisfactory side (above 2.5) of a four-point scale, and three-quarters of those asked rated their schools favorably or equally with stateside schools they have known. Teachers proved to be harder raters of the facilities than school principals. Students were less positive than teachers when asked about their own classrooms and more positive regarding other features of the school.

Principals and teachers were most positive about the physical condition of the classrooms, giving these rooms a higher rating than other attributes of the school plant. On a scale where 2.5 would be the mean, exactly halfway between very satisfactory and very unsatisfactory, principals rated the facilities highest with a mean score of 3.0. Teachers and students were in

CONDITIONS	PERCENT OF SCHOOLS
Grounds	
Attractive and Well Tended	48%
Unattractive but Well Tended	32%
Attractive but Unkempt	16%
Unattractive and Unkempt	3%
Building Exterior	
Like New	10%
Good Condition	67%
Some Decay	23%
Dilapidated	0%
Hallway Floors	
Like New	18%
Good Condition	53%
Moderately Deteriorated	24%
Badly Deteriorated	3%
Extreme Variation	3%
Hallway Walls & Ceiling	
Like New	15%
Good Condition	59%
Moderately Deteriorated	23%
Badly Deteriorated	0%
Extreme Variation	3%

EXHIBIT 8-4

RATINGS OF THE PHYSICAL PLANT

	PRINCIPALS	TEACHERS	GRADE 5-12 STUDENTS
Classrooms	3.0	2.9	2.9
Gymnasium	2.6	2.3	3.1
Lounges	2.7	2.3	N.A.
Playing Fields	2.3	2.2	2.8
Heating/Cooling	N.A.	2.4	2.0
Science Labs	N.A.	2.2	3.1
Nurse's Room	2.4	2.6	3.0

EXHIBIT 8-5

COMPARISON OF MEAN RATINGS FOR SELECTED COMPONENTS OF THE SCHOOL PLANT general agreement that classrooms are in satisfactory condition, rating them 2.9.

Principals are most critical of the school playgrounds and playing fields, as are teachers. Both types of respondents rated them unsatisfactory with median scores of 2.3 and 2.2. Students, on the other hand, are satisfied with the playing fields and playgrounds, rating the heating and cooling systems lower.

The data indicate significant variation in the physical facilities across DoDDS regions. Teachers report their classrooms are in excellent condition in Panama but just acceptable in the Mediterranean (Exhibit 8-6). There is virtually no complaint with the heating and cooling systems of schools in Panama, while in three regions (the Atlantic, Mediterranean, and Pacific) systems are rated on the negative side of a four-point scale. In all regions, playing fields and playgrounds are rated on the negative side of the scale.

The schools overall are reported to be in safe condition with no known hazardous conditions at 68 percent of all schools. At the time of data collection, 15 percent of the principals reported a hazardous condition had recently developed that was awaiting correction. As overall percentages these are on the generally positive side; however, 18 percent of the schools in the system experience a continuous or recurring hazardous condition that has yet to be properly tended. For these situations, concern must be expressed and repair and maintenance services questioned.

	MEAN SCORE		
	CLASSROOMS	HEATING & COOLING	PLAYING FIELDS/ GROUNDS
Germany-North	3.0	2.5	2.1
Germany-South	3.0	2.6	2.3
Mediterranean	2.7	2.0	2.0
Atlantic	3.2	1.9	2.4
Pacific	2.8	2.3	2.3
Panama	3.4	3.1	2.3

EXHIBIT 8-6

TEACHERS' RATINGS OF ASPECTS OF
THE PHYSICAL PLANT BY REGION

Perspectives of DoDDS Principals

Fully one-quarter of school principals believe their buildings and the classrooms, hallways, offices, and gymnasiums in these buildings are in excellent physical condition. However, another quarter of the principals rated the buildings on the negative side, and one-quarter reported their gymnasiums to rate at the very lowest end of the scale (Exhibit 8-7). The aspects of the physical plant of which principals were most often critical were the playing fields and playgrounds, the nurse's (health) room, and the area designated for storage of supplies. In each of these areas more than half of the school principals believe their facilities rate as only fair to poor. Media Resources Centers or libraries are apparently one of the stronger points in the schools. These focal points of educational activities were reported to be excellent by 4 out of 10 principals and good by an additional 4 out of 10 principals. The aspects of the physical plant most criticized by principals were the playing fields and playgrounds, the nurse's (health) room, and the area designated for storage of supplies. In these categories more than half of the school principals believe their facilities rate as only fair to poor.

Conversations with representatives of the military communities within DoDDS oftentimes lead to discussions of the importance of the schools to community life. Sports programs, particularly at the high school level, can play a critical role in the morale of these American communities abroad. Many commanders

	EXCELLENT	GOOD	FAIR	POOR
Buildings	26%	46%	22%	6%
Classrooms	24%	53%	19%	7%
Media Resource Center/ Library	39%	38%	17%	6%
Gymnasium	24%	32%	19%	25%
Playing Field/Playgroun	10%	34%	35%	21%
Health Room	13%	37%	31%	19%
Hallways	25%	52%	14%	8%
Offices	29%	45%	21%	5%
Staff Lounges	15%	48%	23%	14%
Supplies Storage Room	9%	30%	33%	29%
Records Storage Area	10%	41%	33%	16%

EXHIBIT 8-7

PRINCIPALS' RATINGS OF THE PHYSICAL
CONDITION OF THE SCHOOL PLANT

look to the schools when considering how to improve and offer a good quality of life. The physical facilities of the schools at many sites fall short of expectations with even their own principals finding them to be less than satisfactory. Many schools depend on the military for gymnasiums and playing fields.

The Perspectives of Teachers

Teachers were asked to rate the physical condition of various rooms and structures within the school plant with particular attention given to their own classrooms. Seven out of 10 teachers reported that their classroom spaces were either excellent or good (Exhibit 8-8). Ratings of the condition of furniture in these classrooms followed the same general pattern as those for the classroom space itself.

Ratings given to ventilation and heating/cooling are particularly worth noting since these have implications for the health of the students and school staff. In the area of ventilation, 6 out of 10 (61 percent) teachers reported it to be excellent to good; every fourth teacher (39 percent) reported it to be fair to poor. While this percentage is not particularly different from the 35 percent of teachers finding the furniture to be in fair to poor shape, ventilation systems have health implications, as do heating and cooling systems, whereas furniture is a matter of quality of life. Teachers were equally divided in their assessment of heating and cooling systems in their classrooms. One-half rated them excellent to good, one half fair to poor.

SELECTED FEATURES	EXCELLENT/GOOD	FAIR/POOR
School		
Classroom Space	69%	30%
Classroom Stortage	45%	55%
Science Labs	38%	62%
Nurse's Room	58%	42%
Gymnasium	46%	55%
Playing Fields/ Playground	38%	62%
Teachers' Lounge	46%	54%
Classroom		
Furniture	65%	35%
Lighting	80%	20%
Cleanliness	67%	33%
Ventilation	61%	39%
Heating/Cooling	50%	50%

EXHIBIT 8-8

TEACHERS' RATINGS OF PHYSICAL CONDITION OF SCHOOL PLANT

Each school plant has a variety of special purpose rooms and facilities which contribute to some aspect of the school's total program. In order to derive a general perspective of DoDDS' physical facilities, teachers were asked to rate several of these other types of resources. Of interest here is the variation found between the classrooms and these auxiliary resources. While few teachers rated their own classroms as being in fair to poor condition (30 percent), twice as many teachers in schools with science labs found the labs to be in fair to poor condition (62 percent). The opinions of teachers regarding gymnasiums, playing fields, and playgrounds reinforce an impression of facilities that offer less than favorable conditions once one looks beyond the basic educational program.

The Opinions of Parents

Six out of 10 DoDDS parents interviewed gave the school facilities their children attend a grade of A or B. The same proportion give this same grade to the plant's physical condition. Seven out of 10 parents rated the manner in which the school grounds are maintained with a grade of A or B. While DoDDS strives overall to provide an above-average school system (A or B), an average grade of C may certainly be viewed as acceptable. Only 15 percent of the parents interviewed reported the school facilities their children attend rate less than an average grade (Exhibit 8-9).

When asked if there were any features of the school plant they particularly liked or disliked, 47 percent of the parents

PHYSICAL CONDITION OF THE SCHOOL PLANT

GRADE	OVERALL FACILITY	SCHOOL BUILDING	UPKEEP OF THE SCHOOL GROUNDS
A	27%	22%	36%
B	35%	36%	39%
C	23%	34%	16%
D	12%	8%	4%
Fail	3%	1%	5%

EXHIBIT 8-9

PARENTAL GRADING OF THE
SCHOOL PLANT

listed at least 1 positive feature; 58 percent volunteered at least 1 aspect they found troublesome. Exhibit 8-10 lists the items described by parents.

Interestingly, the features best liked by parents are those important to their children's education, while features criticized are not associated as closely with what is educationally important (Exhibit 8-11). The characteristics of the physical plant of which parents speak positively are seen as being more important to their children's general well-being than to their education. While 14 percent reported the feature to be not very important to their children's education, only 6 percent considered this same feature unimportant to their children's well-being. Negative features provide more of a ground for concern for general well-being than for the children's education. Half of the parents report the features of the school plant they find to be troublesome are very important or important issues in their concern for their children's well-being. What we find is 30 percent of DoDDS parents register concern that aspects of the physical plant impact negatively on their children's well-being, while 70 percent report no similar concern.

MAJOR CONSTRUCTION

Until 1978, cognizant military services had responsibility for planning, funding, and construction of new schools, major additions, and renovations. DoDDS facilities were thus totally at the discretion of the military services. The quality of

FEATURE LIKED	PERCENT OF PARENTS*
Close to Housing	7%
Other Location Feature	7%
Well-Designed/Constructed Building	6%
Modern/Complete Facility	4%
Well-Equipped/Appointed	4%
Attractive Exterior	4%
Specific Exterior Feature	2%
Fenced Playing Area	3%
Playground Well Equipped	4%
Features of Classrooms	6%
Media Center	5%
Other Specific Features	6%
Other	5%
TROUBLESOME FEATURE	
Dangerous Location	14%
Noisy Location	3%
Other Problem with Location	4%
Inadequate Physical Education Facilities	9%
Inadequate Playground	8%
Lack of or Inadequate Cafeteria	1%
General Inadequacy/Poor Appearance	5%
Unsafe Features	6%
Building/Grounds in Disrepair	6%
Utilities Dysfunctional	4%
Design and/or School Site Factor	8%
More Than One Building	7%
Building Shared by More Than One School	2%
Other	4%

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*More than one response permitted.

EXHIBIT 8-10

PERCENT OF PARENTS REPORTING OPINIONS ABOUT FEATURES OF SCHOOL FACILITIES

IMPORTANCE TO	GOOD FEATURES	BAD FEATURES
Children's Education		
Very Important	31%	15%
Important	22%	13%
Somewhat Important	32%	28%
Not Very Important	14%	44%
Children's Well-Being		
Very Important	41%	20%
Important	25%	28%
Somewhat Important	28%	25%
Not Very Important	6%	27%

EXHIBIT 8-11

RATING OF SCHOOL FACILITY FEATURES IN
REGARD TO CHILDREN'S EDUCATION AND WELL-BEING

school facilities throughout the system was the subject of much concern. Former German Army barracks and five-story warehouses converted to school buildings were cited as examples of the problems resulting from military responsibility for school construction.

In 1978, DoDDS was delegated authority and responsibility for the construction program. During the 10-year period prior to this transfer, the military services expended approximately $101,500,000 for 45 new construction projects. In the 5 years since DoDDS took responsibility, 60 projects with a total value of $207,461,000 have been approved as line items in the military construction [MILCON] budget. The average annual number of major construction projects funded rose from 4.5 per year to 12. The annual construction budget request is determined jointly by DoDDS and OSD. Once a bottom line has been established, ODS determines the projects and the individual allocations to be included in the budget request.

Planning for Major Construction

DoDDS has instituted a five-year planning cycle for school construction. At the local level, 6 out of 10 schools currently expect to undertake construction at some future point. Plans on record at the Regional Office level show the figure to be 4 schools out of 10. ODS reports the worldwide 5-year plan has a current value of $500 million.

Each Regional Office coordinates a construction program based on locally expressed needs and the Regional Office staff's knowledge of the conditions of school facilities. Regional plans are reviewed and prioritized on a systemwide basis in Washington by a committee comprised of ODS staff. Once a project is approved in concept by this committee, the cognizant Regional Office is informed of the funding level and student enrollment is approved by ODS, authorization is given to initiate planning and design. Land acquisition and 35 percent of design must be complete before ODS will consider including it in the MILCON budget request presented to Congress.

The planning and construction of new facilities can be delayed considerably when a site already in the control of a U.S. base cannot be found. In such cases negotiations must be undertaken with host nation governments, and control of the situation is out of the hands of DoDDS. One construction project submitted to Congress for consideration in the FY83 MILCON budget was held in the planning stage for 13 years awaiting host nation approval of a site. Given the problems of securing sites when land is not in U.S. control, it is reported that efforts are directed at locating schools on bases, frequently at the cost of adequacy of size and desirability of location. When sites in military control are used, it is the cognizant commander who has final say in site selection. As noted in a previous section there are problems with siting decisions made in the past. One out of five parents believe their children's school is in a dangerous, noisy, or otherwise unacceptable location. Two out of five principals report the space available for playing fields is inadequate.

The planning and building of an overseas school is a complex process with a worldwide complement of participants, each having the ability to influence the final product. Further, the process varies to some degree on the basis of the region, military service to be served, and the country in which the construction is to occur. At each point in the process the emphasis is on quality and cost containment. The philosophy espoused by ODS and implemented by Regional Offices is the construction of functional facilities that are adaptable and flexible.

Principals at the 10 schools in the sample currently involved in a major construction program were generally impressed with the level of commitment and support provided by their community commander. Commanders were reported as becoming involved in a variety of ways. They assisted in the documentation of need, participated in selection of a site, provided their own services and those of community engineers in an advisory capacity, and took a general interest in progress. All but 3 of the 10 principals felt that the school's educational mission had been foremost in the mind of the commander.

Variation in regional practices and movement of staff influence the involvement of school-level administrators in the planning of major construction projects. Seven principals reported they were prime initiators of the construction program, and devoted time to the concept before the Regional Office became involved; six continued this involvement after the Regional Office assumed responsibility for getting the plans approved.

Best practices stateside recommend local-level involvement in school planning. The architects' theory of "charrette" recognizes advantages in a broad-based planning activity. The character of a community can be reflected in the educational specifications, and people with current classroom experience can bring new insights as to the best utilization of space. While ODS encourages this, the theory is not practiced in all DoDDS regions, possibly because the communities and school staff are viewed as transient populations that will not be present when the new or expanded facility eventually is put to use. Practices also vary as to the involvement of Regional Office educators.

The figure below provides a breakdown of participants at the 10 sample schools, showing how participation was not broad at the early stages and actually decreased once the task of developing educational specifications was undertaken.

Number of Schools Reporting Local-Level
Involvement in Planning New Major Construction

	STAGE OF PROCESS	
Type of Individual Involved	Identification of Need	Development of Specifications
School Administrators	7	6
Teachers/Specialists	3	1
Parents/Advisory Committee	1	1

Among the 6 sampled schools that passed the 35 percent mark for planning and design, 4 reported the Regional Office facilities engineer was the individual most involved with the project; at the remaining 2 sites the Regional Office facilities engineer was the person having the second greatest level of involvement (after the military engineers).

Regional Office personnel are provided guidelines through DoD Construction Criteria for the planning of new school space. These guidelines include criteria on the number of square feet that should be allocated per pupil for general-purpose and for special-purpose rooms. Several states provide comparable guidance for building area and general and special purpose rooms. As with DoDDS, several express this as a range. Guidelines can also be expressed in terms of maximum allowable square feet per student. This is done by 11 states and by DoDDS through recently circulated guidance. Exhibit 8-12 compares the average of DoDDS guidelines with the stateside guidelines. DoDDS allows larger total building size than stateside (on a per-student basis) at the elementary level but specifies fewer square feet per student for schools serving junior high and high school students. DoDDS guidance is more generous than stateside in terms of recommended classroom size for general-purpose rooms, while such guidance is less generous as regards special purpose rooms for which comparative data are available.

A difference noted between DoDDS and stateside guidance is the more restrictive nature of DoDDS guidelines. Whereas both

	SQUARE FEET		
	DoDDS	STATESIDE	PERCENT DIFFERENCE
Maximum Footage Per Student			
Elementary School	97	91	+ 6.6%
Middle/Junior High	110	126	-12.7%
High School	125	145	-16.0%
Average Net Footage			
Elementary Classroom	950	834	+13.9%
Secondary Classroom	850	838	+ 1.4%
Home Arts Room	1750	1743	+ 0.4%
Music Room	1100	1162	- 5.3%
Industrial Arts Shop	1750	1849	- 5.3%

Source: DoD construction criteria DOD4270.1-M, June 1, 1978, pp. 3-79 to 3-85, "State Requirements Survey for School, Construction K-12, 1981." State Requirements Survey Task Force, American Institute of Architects. DoDDS guidance, August 1982.

EXHIBIT 8-12

COMPARISON OF DoDDS SQUARE FOOTAGE GUIDANCE
WITH STATESIDE GUIDANCE

DoDDS and states provide ranges of minimum and maximum recommended footage, stateside planners and architects have a broader range within which to work, particularly where special purpose rooms are concerned. Furthermore, DoDDS is currently enforcing the minimum guidance as the maximum allowable footage for planning.* This flexibility, particularly useful in the construction of small schools, is available to DoDDS planners through waiver.

Construction of the Facility

Construction of schools must conform to DoD Construction Criteria. Enforcement of the criteria is the responsibility of the division of engineers of the military service in charge of overseeing the construction project. The criteria are augmented by ODS only in the area of square footage allowances. One Regional Office reported having prepared its own school related supplement to the DoD criteria,** a supplement heavily relied on by the engineering division. It contains functional criteria that provide specific recommendations for constructing and equipping school buildings. By making these available, the Regional Office is assured that contractors will install windows that are safe for heavily traveled hallways, cabinets that are reachable by six-year olds, and sinks that meet the needs of an industrial arts educational program. No such guidance is available on a worldwide basis.

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*March 4, 1982, Policy Guidance to Engineers of all Services Regarding DoD Construction Criteria.

**Other regions include additional criteria on a project specific basis via the educational specifications.

Construction Policy

Current practices at ODS regarding planning for construction are based on a firm determination to not overbuild. This was reported as being accomplished by adhering strictly to the minimum footage guidelines provided in the Construction Criteria and by projecting enrollments based on "hard" troop strength projections rather than on the future strength figures used by local military installations in their construction planning cycles. To accommodate future changes, Regional Offices are instructed to design new construction with the capability for future expansion.

ODS insistence on this policy and decisions, guided by a desire to impact as many sites as possible within the budget limitations, can lead to friction between ODS and the Regional Offices, which serve as the pressure point in the system. They must plan and design construction projects within the criteria enforced by ODS. They must also deal with representatives of military communities who are not only anxious to have the best schools possible but may bring pressure to build schools in accordance with local projections of troop strength that are guiding their own building programs.

Many military commanders are critical of the manner in which DoDDS is managing the construction program in terms of the size and budget constraints being imposed on individual facilities.

Similar concerns are also voiced by Regional Office staff who are required to build within nonforward-looking enrollment projections and square footage criteria.

The school construction program is tightly controlled by ODS. Final decisions as to school size and funding are made at this level. Once construction is underway, change orders must be approved by ODS, with the exception of changes responding to site-based problems which the division of engineers or site representative has authority to approve. This guards against capricious and cost inflating changes and encourages field personnel to make sure that they receive sound designs.

MINOR CONSTRUCTION, REPAIR, AND MAINTENANCE

New construction valued at less than $200,000* and repair and maintenance services are funded under the Operations and Maintenance [O&M] budget of DoDDS. The services are provided through the military which charges DoDDS funds directly. Interservice Support Agreements [ISAs] are negotiated between DoDDS and the military services for the provision of reoccurring O&M services to schools under Defense Retail Interservice Support [DRIS] Regulations. Approximately 150 ISAs covering all aspects of logistics support services are in effect DoDDS-wide. They range in comprehensiveness from school complex to worldwide. A General Accounting Office report indicates that 44 percent of these ISAs were expired at the time of audit and had not been renegotiated.* Since the time of the GAO audit, this situation has been corrected; all but 9 percent of ISAs have been renewed.

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*$100,000 prior to FY83.

To determine how much input the schools have in determining what services they will receive, principals were asked about participation in the process. They were evenly divided between those aware of having been brought into ISA planning and those not aware of having any involvement. Provision of data (32 percent of those participating), consultation with the military (26 percent), and consultation with the Regional Office (16 percent) were the most frequently reported roles assumed by principals.

Beginning with the budget for FY79, DoDDS-wide O&M has averaged $20 million annually. This contrasts with an $8 million annual budget for the preceding 4-year period. This increase has been deliberate on the part of DoDDS. Nonrecurrent maintenance, repair, and minor construction are funded on a project specific basis. This portion of the budget is reportedly being emphasized in an attempt to upgrade neglected facilities.

Planning for Minor Construction, Maintenance, and Repair Services

Each Regional Office requires school principals to identify and report, on an annual basis, projects requiring engineering support. Regional Offices annually provide administrative instructions to the schools to be referenced when preparing lists of projects. These describe the principal as having initial responsibility for prioritizing projects and may or may not include specific guidelines for accomplishing this. In those regions having an intermediate structure, priorities are reassigned at this level. Regionwide lists are then prepared. The schedule for such reporting varies by region, as does the lower dollar limit for what should be reported.

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*Report to the Secretary of Defense: Management Control of the Department of Defense Overseas Dependents Schools Needs to Be Strengthened. U.S. General Accounting Office. GAO/HRD-83-3, November 4, 1982.

Two-thirds of the schools visited reported that their full request for minor construction or nonrecurring maintenance and repair had been approved. At the remaining one-third of schools some portion of the request was denied. These denials generally came from the Regional Office. At slightly under 30 percent of all DoDDS schools some repair, renovation, or expansion deemed to be needed by the principal will not be undertaken because it was not authorized for the next school year. The average value of the projects not included in the DoDDS budget request is $26,700. In 80 percent of the cases principals were told requests were being denied due to lack of funds. In 40 percent of all cases principals were informed the requested project had a low priority.

While the value of the O&M program is reported by ODS and the Regional Offices as being developed from the bottom up, not all schools take the expected next step once they have been notified of their authorized budget. Principals at only slightly more than half the schools visited reported having a written plan describing the services the schools would require. Repair and maintenance plans were available at 61 percent of all sites, with minor construction plans at 46 percent of all sites.

Where maintenance and minor construction plans are developed the responsibility is apparently deemed important enough to not be delegated. The school principal and engineer participated in the process at 9 out of 10 sites having plans. Exhibit 8-13 describes the sources to which principals turn to document school needs in this area and project the provision of services. While schools having EPAs and complex coordinators were visited, principals did not report that persons in these positions are participating in the planning process.

Where plans exist, they typically identify the time frame in which specific services or projects should be undertaken (77 percent), assign priorities to these projects (85 percent) and include cost estimates for the work (85 percent). These schedules for minor construction, maintenance, and repair services range in scope from one-year projections to six-year projections, averaging three years forward.

At about three-fourths of the sites visited the engineers of the supporting military installations reported having been involved in projecting the schools' requirements for the upcoming school year and planning the repair and maintenance program. Slightly less than one-third of these engineers reported that they review this program and the schools' needs for services with school personnel. The process described by the others did not mention school involvement. What schools do most frequently is

REPORTED PARTICIPANTS	PERCENT OF SCHOOLS
School Principal	93%
Base Engineer	87%
Teachers	67%
Regional Office/Facilities	63%
Assistant Principal	57%
Other School Staff	43%
Regional Office/Fiscal	37%
Schools Officer	30%
School Advisory Committee	23%
Community Commander	17%

EXHIBIT 8-13

INDIVIDUALS PROVIDING INPUT TO PLANNING FOR REPAIR, MAINTENANCE, AND MINOR CONSTRUCTION AT SITES HAVING SUCH PLANS refer to earlier requests or their own inspection of the premises (Exhibit 8-14). Roughly the same proportion of engineers are involved in projecting school needs for minor construction. The nature of engineers' involvement in this process varies across sites, as is shown in Exhibit 8-15.

Engineers were asked to rate the adequacy of the schools' planning processes to ensure that proper services are received. Overall, the processes were seen as adequate at 61 percent of the schools, and the same proportion of engineers were generally satisfied (65 percent) with the schools' abilities to communicate their needs. However, these data do suggest that at every third school, administrative staff are not adequately projecting the services that will be required during the upcoming school year. Where this occurs, it is likely that provision of services to schools cannot readily be incorporated into the work schedules of the engineer's office. When asked if modifications in the planning process would enable the military to be more responsive to school needs, 7 out of 10 engineers had definite suggestions for improvement. Of these, 43 percent indicated a need for long-range planning, while 31 percent cited a need for improvement in the way school personnel participate in the process of anticipating the services their facilities will require. Three out of 10 engineers giving recommendations believed services to schools would improve if the schools would designate single individuals to work with the engineering offices. These are the engineers for the 20 percent of all schools that have not yet instituted such a practice.

	PROGRAM	
METHOD USED	PHYSICAL FACILITY	EQUIPMENT
Inspection by Service Provider	61%	67%
School Requests	67%	53%
Joint Review with School Personnel	19%	17%
Instructions from Regional Office	14%	6%
Reference to Forward Plan	8%	3%
As Specified by Regulation	14%	8%
Other	6%	3%

EXHIBIT 8-14

METHODS USED BY ENGINEERS TO ESTABLISH
ANNUAL SCHOOL PROGRAM FOR MAINTENANCE AND REPAIR

ENGINEER'S ROLE	% OF THOSE INVOLVED REPORTING ACTIVITY	% OF ALL ENGINEERS NOT ENGAGING IN ACTIVITY
Process Paperwork	41%	65%
Estimate Costs	29%	71%
Develop Plan	29%	71%
Provide Guidance	18%	N.A.
Other Involvement	21%	N.A.

EXHIBIT 8-15

NATURE OF BASE ENGINEERS' PARTICIPATION IN PLANNING SERVICES FOR THE UPCOMING SCHOOL YEAR

The ability of school staff to properly communicate school needs to military resource management offices is an important one since 86 percent of the engineers reference school requests (67 percent) or jointly review school maintenance and repair needs (19 percent) with school personnel. First-hand inspections of the plant by the service provider are conducted at 61 percent of the schools visited at the time plans are developed.

Before projects of $100,000 or more can be undertaken they are referred to Washington for approval. The Regional Offices have approval authority below this amount. Further delegation of approval authority to principals varies across regions. Principals' authority may be limited at $500, $1,000, or $2,000, based on the type of project, the region in which the school is located, and local engineers' practices regarding use of precommitted funds.

Provision of Minor Construction, Maintenance, and Repair Services

Visits for formal planning purposes are not the only ones made to schools. Nine out of 10 schools are visited by a member of the engineering office staff at least once a month. Seven out of every 10 schools receive visits at least weekly, and at 2 out of 10 schools the relationship with the military resource management office is such that a member of the office staff stops by on a daily basis (Exhibit 8-16). Larger schools are visited more frequently than the smaller ones, a positive sign, since it might be assumed they would require more attention. Communication with the school principal and personal contacts and visits were cited

		SCHOOL ENROLLMENT SIZE	
FREQUENCY	ALL SCHOOLS	LESS THAN 400	400 OR MORE
Less Than Once a Month	9%	13.3%	5%
Once a Month or More	91%	87%	95%
Once a Week or More	63%	53%	70%
Twice a Week or More	29%	13%	40%
Daily	20%	0%	35%

EXHIBIT 8-16

FREQUENCY OF ENGINEER OFFICE STAFF
VISITS TO SCHOOLS

by 78 percent of the engineers as the most important factors affecting the resource management office's relationship with the school.

All schools visited were reported to be following appropriate local channels to obtain routine maintenance and repair services during the course of the school year. Written work orders and telephone requests are used by all but 11 percent of the schools (Exhibit 8-17). What constitutes appropriate channels varies throughout DoDDS, primarily as a function of the branch of the service with which individual schools work. While policies exist that outline responsibilities in the process of providing engineering support, implementing guidelines are under development and not currently available, allowing for even greater variations to occur in practice.

Local engineers are generally satisified with the process by which maintenance and repair services are provided (68 percent) and recommendations for improvement were offered by only one-third of those interviewed. These suggestions varied tremendously. Four of the 38 engineers did suggest improving the responsiveness of the Regional Office. Three suggested that the schools should have greater ability to authorize services.

Maintenance and repair services arranged through the military may be provided by a variety of means. A combination of contracts with host national or U.S. companies overseas and direct hire of local nationals is the approach used most

PROCEDURE	PERCENT
Written Work Order Only	27%
Telephone Only	14%
Work Orders and Phone Calls	49%
Other	11%

EXHIBIT 8-17

PROCEDURES USED TO REQUEST SERVICES
OF ENGINEERS' OFFICES

frequently (Exhibit 8-18). At 3 out of 10 schools more than 75 percent of the DoDDS maintenance and repair dollar is spent under 1 or the other method. Custodial services are provided almost exclusively under contract.

Reports of engineers suggest the contract mechanism is used because of cost-effectiveness. However, there is some division of opinion as to whether this mechanism is cost effective or more costly; provides more or less flexibility; or allows for better quality and more supervision or less control over quality. Opinions are similarly divided in regard to direct hire of local nationals (see Exhibit 8-19).

Current procedures within DoDDS allow lead principals of school complexes to determine whether copies of contracts (or synopses) will be given to principals of individual schools. Only one-third of the principals reported having copies of all the contracts describing the services their schools were to receive. Another third had copies of some contracts but not all, and at the remaining schools there was no document for personnel at the school for reference in finding out if the school was receiving its entitled services.

Of those principals who did have copies of contracts, three-quarters reported that they conduct reviews of the content of such contracts, half at least annually. Such reviews are undertaken to determine if requirements have changed with changes in school operations or the educational program, or to determine if modifications in contract requirements would solve problems

MAINTENANCE AND REPAIR	PERCENT OF SERVICES 100%	75-99%	50-74%	25-49%	LESS THAN 25%
Under Contract	22%	5%	11%	16%	46%
Direct Hire/Local Nationals	8%	24%	14%	14%	40%
Direct Hire/U.S. Civilians	0%	0%	3%	0%	97%
Military Personnel	0%	0%	3%	5%	92%
CUSTODIAL					
Under Contract	81%	8%	0%	0%	11%
Direct Hire/Local Nationals	5%	0%	0%	0%	95%
Direct Hire/U.S. Civilians	0%	0%	0%	0%	100%
Military Personnel	0%	0%	0%	0%	100%

EXHIBIT 8-18

PERCENT OF ENGINEERS REPORTING METHODS FOR PROVIDING SERVICES TO THE SCHOOLS

	SOURCE OF SERVICE			
	CONTRACT	LOCAL NATIONAL HIRE	U.S. CIVILIAN HIRE	MILITARY PERSONNEL
ADVANTAGES				
Cost Effective	42%	22%	5%	24%
More Flexibility	25%	36%	3%	19%
Better Quality Work	17%	17%	3%	0%
More Control/Supervisor	8%	25%	11%	11%
More Knowledgeable of Codes, etc.	8%	17%	5%	0%
Greater Availability	25%	11%	3%	5%
Understand U.S. Operations	0%	0%	14%	3%
Better Communications	0%	0%	19%	3%
Other	19%	6%	3%	11%
Not Applicable	11%	19%	57%	40%
DISADVANTAGES				
More Costly	21%	25%	19%	11%
Lacks Flexibility	41%	11%	3%	3%
Low Skills/Training	14%	14%	5%	30%
Less Control over Quality	45%	3%	0%	3%
Lacks Familiarity with Codes, etc.	3%	0%	11%	8%
Communication Problems	3%	25%	5%	0%
Scheduling Problems	17%	8%	0%	14%
Demeaning	0%	0%	0%	11%
Other	17%	19%	30%	8%
Not Applicable	3%	22%	40%	32%

EXHIBIT 8-19

ENGINEERS' PERCEPTIONS OF
METHODS OF SERVICE PROVISION

the schools are having with the adequacy of contracted services. Of principals conducting such reviews, roughly one-half reported noticing that their requirements had indeed changed; almost all of the principals noticing these changes felt they were significant enough to seek a modification to the document. Using the reciprocal of the figures just cited, one questions the adequacy of contracts now in effect at the roughly one-half of all schools where principals do not have copies of contract documents or, if they do have them, have not undertaken to analyze these documents for adequacy.

Three-fourths of the school principals (73 percent) were aware of having received guidance from DoDDS intended to assist them in making decisions about maintenance, repair, and minor construction. Almost all recalled receiving formal written directives (86 percent). This was augmented by informal guidance from the Regional Office at 59 percent of the sites visited. Seven out of 10 principals had cause to refer to the guidance, and all found it to be useful.

Minor construction projects undertaken by the schools must conform with DoD regulations, standards, and criteria, as well as various codes of the host nation. Half of the schools visited had undertaken a minor construction project during the preceding school year. Principals at two-thirds of these schools were aware that such projects must follow certain guidelines. Very few problems or limitations were traced to these guidelines by either school principals (15 percent) or military engineers

(14 percent). At only one school was the problem seen to be a major one that had not been satisfactorily resolved. The reported problem was with DoDDS allowances for square footage promulgated in 1978, which were seen as being out-of-date and having a direct negative impact on the school's educational program.

One-half of the installation engineers reported having no problems meeting school needs in the area of minor construction. Among those that did, one-half felt that the nature of the funding cycle was the major source of the problem. Four out of 10 attributed it to a lack of lead time between the receipt of an authorized request for service and the completion date expected by the school system.

The importance of forward planning over an extended period is closely linked to the DoDDS funding cycle, the requirement for Regional Office (and ODS) approval, and the time required to accomplish design activities (in the case of minor construction) and procure contractor support for all but the smallest projects. The entire cycle from school identification of need to completion of work requires 20 months in Germany, where one-half of all schools are located (Exhibit 8-20).

All in all, the engineers interviewed believed the services the schools are receiving rate very high. On a five-point scale the mean score given by the engineers to their school services was 4.4 (Exhibit 8-21). Engineers at schools on Navy installations rated their services highest (4.8), followed by those on Air Force (4.4) and Army installations (4.2). These engineers

	JAN 82	IDENTIFY FY83 REQUIREMENTS
	FEB	SUBMIT WORK ORDERS
FY82 PROJECT FUNDING	MAR	PROVIDE BUDGET ESTIMATES
	APR	SUBMIT LIST TO DODDS REGION
FY82 PROCUREMENT	MAY	
	JUN	DoDDS REGION COMPILES PRIORITIES
	JUL	ISSUE DESIGN INSTRUCTIONS
FY82 WORK ACCOMPLISHMENT	AUG	VERIFICATION BY ENGINEER
	SEP	
	OCT	
	NOV	
	DEC	
FY84 IDENTIFY REQUIREMENTS	JAN 83	PROJECT DESIGN
FY84 SUBMIT WORK ORDERS	FEB	
FY84 PROVIDE BUDGET ESTIMATES	MAR	PROJECT FUNDS REQUIRED
FY84 SUBMIT LIST TO DoDDS REGION	APR	
	MAY	PROCUREMENT
FY84 DoDDS REGION COMPILES PRIORITY	JUN	
FY84 ISSUE DESIGN INSTRUCTIONS	JUL	
	AUG	WORK ACCOMPLISHMENT
	SEP	

EXHIBIT 8-20

APPROVAL, DESIGN, AND CONSTRUCTION CYCLE

	BASE ENGINEER'S RATING	ENGINEER'S PERCEPTION OF PRINCIPAL'S OPINION
All Schools	4.4	3.9
Air Force	4.4	4.0
Army	4.2	3.7
Navy	4.8	4.0

EXHIBIT 8-21

MEDIAN RATINGS OF MAINTENANCE AND REPAIR SERVICES believe school principals would, on the average, give the services lower ratings than the engineers give them (a 3.9 compared with the engineers' 4.4). The principals do indeed give them a lower rating--2.8. The discrepancy (acknowledged by one-half of the engineers) was attributed to school personnel's lack of understanding of the system and how to work within it by one-third of the engineers. Another third attributed the discrepancy in opinions to differences in expectations. Others were divided among other reasons. Some of these differences in expectations may result from the school staff not having copies of documents describing the services the school is entitled to, or if they do have copies not having read them.

Of the services provided through the engineers' offices, principals are most frequently pleased with trash disposal and custodial services (Exhibit 8-22). They most frequently report poor or very poor quality service in the area of grounds tending, nonroutine maintenance, and minor construction.

When they do experience problems with services the nature of the problem tends to vary with the type of service (Exhibit 8-23). Principals attribute problems with custodial services to the quality of the service or workers assigned to the task (50 percent) and the lack of supervision of these workers (27 percent)--a problem with contract work also reported by the engineers. Grounds tending problems are most often those of quality (31 percent) and incomplete service or nonperformance (31 percent). The most frequently cited reason for principals' rating of routine maintenance as poor is that the service is not

SUPPORT SERVICE	VERY GOOD	GOOD	POOR	VERY POOR
Custodial Services	34%	44%	18%	4%
Grounds Tending	14%	47%	32%	8%
Trash Disposal	21%	62%	15%	1%
Routine Maintenance	14%	62%	18%	6%
Minor Repairs	20%	55%	18%	7%
Nonroutine Maintenance	9%	56%	27%	8%
Minor Construction	11%	57%	21%	12%

EXHIBIT 8-22

PRINCIPALS' RATINGS OF SELECTED
SUPPORT SERVICES

NATURE OF PROBLEM	TYPE OF SERVICE CUSTODIAL	GROUNDS TENDING	ROUTINE MAINT.	MINOR REPAIRS
Service Not Provided, Incomplete	18%	31%	24%	11%
Service Not Timely	10%	23%	53%	50%
Service/Workers Not Dependable	14%	15%	18%	11%
Service/Workers of Poor Quality	50%	31%	29%	28%
Lack of Supervision/ Monitoring	27%	8%	6%	6%
Shortcomings in Statement of Work	9%	8%	6%	6%
Other	50%	8%	35%	28%
Mean Severity (5-point scale)	3.4	2.8	3.3	3.0

EXHIBIT 8-23

TYPES OF PROBLEMS WITH SUPPORT SERVICES
REPORTED BY PRINCIPALS

in a timely manner. Fully one-half of all the schools reported experiencing this difficulty. Incomplete work (24 percent) and poor quality (29 percent) were also among the reasons given for low ratings in this area. Timeliness is also an issue with minor repairs (50 percent), with the quality of these repairs judged inferior by principals at 3 out of 10 schools. These problems with the services should not be dismissed as minor complaints. Principals rated all but grounds tending problems on the severe problem half of a five-point scale.

In addition to difficulties with the services themselves, principals at one-quarter of the schools reported that maintenance and repair services were denied them a few times or on numerous occasions. This happened less frequently with custodial and grounds tending services.

The data indicate the reason for one half of all delays in securing needed services is the absence of authorization to proceed due to lack of funds (49 percent), followed by the inability of the engineering office to get to the job immediately (43 percent). Such delays are found to affect administration of the educational program at 4 out of 10 schools in the system. At 2 of every 10 schools principals have had to make adjustments frequently to class schedules, class size, and teaching assignments. At 44 percent of all schools, educational programs had been modified or delayed during the preceding 12-month period because needed new construction or repairs had not been undertaken.

The extensiveness of this interference, however, is reported to be slight by the principals. Only 2 principals in 10 reported moderate to extensive interference, generally resulting from nonroutine maintenance, minor construction, and minor repair (Exhibit 8-24). The observation is offered that, in the case of these particular types of services, the situation requiring attention was probably interfering with the educational program.

Payments for Services

Once services are provided they are billed by the military and paid by DoDDS. DoD regulations and those of each service specify how bills are to be computed. DoDDS does not have authority to provide installations with guidance for interpreting these regulations, and thus each installation imposes its own service's interpretation on DoDDS. The data gathered in the field substantiate that practices vary, and one school may not pay for services based on the same computations as the next school.

Engineers were asked to describe the procedures used to determine how schools will be billed for utilities. One-third reported using more than one technique. At three-quarters of the installations utility bills are computed based on the population served, the size of the building, or the configuration of the school facility. Such computations are within DRIS regulation; DoDDS, however, has not specified acceptable standarized formulas. At one-third of the schools, reference is made to historical data, which are adjusted according to inflation

SUPPORT SERVICE	NO INTER-FERENCE	LITTLE INTER-FERENCE	MODERATE INTER-FERENCE	EXTENSIVE INTER-FERENCE
Custodial Services	57%	29%	13%	1%
Grounds Tending	54%	32%	14%	0%
Trash Disposal	73%	24%	4%	0%
Routine Maintenance	29%	55%	14%	2%
Minor Repairs	24%	53%	19%	4%
Nonroutine Maintenance	27%	47%	19%	6%
Minor Construction	31%	40%	19%	10%

EXHIBIT 8-24

INTERFERENCE OF SELECTED SUPPORT SERVICES WITH SCHOOLS' EDUCATIONAL PROGRAMS for billing purposes. Metering is used for some components of utilities at three-quarters of the schools. This approach results in billings being a direct reflection of actual usage.

Under regulations it is the responsibility of school principals to verify the receipt of services before payment is authorized. Principals were asked if they had ever been overcharged for services the school had received through the military. Recognizing that services such as utilities are difficult to monitor, while others, such as repair and minor construction, are highly visible, 2 out of 10 principals said they had never been overcharged. One-quarter stated they had been overcharged once or a few times. One in 4 principals reported having no data from which to form an opinion. DoDDS procedures require only that complex coordinating principals receive bills accompanied by substantiating documentation since they are authorized to certify payments. It is the responsibility of these coordinators to ascertain from the subordinate principals if the work was provided according to specification and as reflected in the billing.

SUPPLIES AND EQUIPMENT

Requisitioning

Supplies and equipment are a seemingly mundane concern whose criticality to attainment of educational objectives is most apparent if the materials are not available. Securing, warehousing, and distributing supplies and equipment are activities that can be handled either efficiently or in such a manner that resources are wasted and high-level administrative attention is required that otherwise should not be necessary. Furthermore, school systems, whether stateside or overseas, operate on a calendar basis, e.g., mid August to mid August in the case of DoDDS. Unlike the majority of stateside school systems, whose fiscal years run July 1 to June 30, DoDDS runs October 1 to September 30, creating a phasing problem for ordering supplies and equipment. Textbooks, first-aid supplies, laboratory and shop equipment, and many office supplies should be available at the start of a school year or semester if they are to serve their purpose. Delivery delays can be at odds with successful attainment of educational objectives.

The acquisition system used by DoDDS was redesigned in 1980 and further refined in 1982 in response to a number of reviews and audits that resulted in recommendations for change. Under the current system, schools, through their Regional Offices, order library books and textbooks directly from vendors and have the materials shipped directly to the schools. This is intended to reduce warehousing requirements for such items, reduce the elapsed time between order and delivery, and minimize the number of DoDDS requisition lines that must be processed by the Defense General Supply Center [DGSC].

Other supplies and equipment are requisitioned through DGSC by the schools through the Regional Offices either for direct shipment to the school or to mini-warehouses in the regions.

DoDDS Regional Offices also obtain materials directly from inventory managers such as General Services Administration outlets. There are allowable sources from which school materials may be obtained with some variation in sources across regions. ODS is currently responding to additional recommendations for improving the system. ODS reports that in FY84 it will adopt the Defense Logistics Agency's Base Operating Support System [BOSS] to provide an automated supply, procurement, and accounting system for all stateside purchases of supplies and equipment.

The scheduling and ordering of supplies and equipment have historically been greatly influenced by the DoDDS budget cycle, particularly the practice of covering teachers' annual salary increases through a supplemental budget request.* Due to uncertainties over congressional authorization of the teachers' supplemental pay increase, regions have not received authorization to fully expend their supplies and equipment budgets until shortly before the cutoff date for encumbering these funds. Regions have taken different approaches to dealing with this late influx of funds. These practices range from keeping logs of second-level priority items (on a school-by-school basis) that can be ordered immediately upon release of funds, to the use of committees of Regional Office staff that decide what new piece of equipment or what school supplies will be ordered for all schools in the region--a practice that is responsible for small schools in the region having expensive audiovisual equipment in each classroom.

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*Effective with the 1983 budget, DoDDS received authorization to include estimated teacher salary increases in the budget request.

For any requisitioning process to be effective it is absolutely critical that standard procedures exist and that they are followed. In issuing the DoDDS Material Management Manual, ODS took a major step in this direction. This manual details the sources for different types of materials, how requisition forms are to be completed, the responsibilities of schools and Regional Offices, time frames required for delivery, and follow-up procedures.

Almost all of the school principals interviewed were familiar with this manual (a few were uncertain of it, having delegated procurement responsibilities to others). Among the principals familiar with the procedural document, three-quarters had the opportunity or need to personally review its instructions with the school supply clerk. Eight out of 10 principals reported having no significant problems with the manual. The problems that were reported tended to be idiosyncratic to the school in question.

Principals also report having standard policies and criteria that they can follow when making decisions regarding the purchase of supplies and equipment. These policies and criteria have been found to be useful by almost all school principals. In addition to formal guidance which has been developed at the ODS, Regional Office, and school level, principals also seek the guidance of others at their facility when determining what equipment and materials are to be ordered. Eight out of 10 principals report depending on teachers and specialists quite a lot or a lot. Teachers are followed by staff in the principal's office as the source for guidance, providing advice to 7 out of 10 principals. School Advisory Committees and parents are hardly ever involved in this process at three-quarters of the schools.

Logisticians tend to recommend, particularly in the area of equipment, that procurement (and disposal) decisions should be informed by formal studies of usage. Such studies are infrequent in the DoDDS system, which relies exclusively on records kept at the Regional Office, where decisions for replacement are made on the basis of age. Seven out of 10 schools report never having formally gathered data on what shop equipment is in use. Six out of 10 have never studied classroom or office equipment. One-half of the schools have given formal consideration to audio-visual equipment (Exhibit 8-25).

Although principals acknowledge that procurement has improved since implementation of the new system, problems do continue to be encountered. Only 3 principals in 10 reported having no problems when procuring supplies and equipment. The length of time it takes to receive materials and difficulties in tracking orders were the problems principals most frequently reported having (Exhibit 8-26). School principals offered recommendations for improving the process. Four out of 10 DoDDS principals would like to see more use of direct processing of orders, and 2 out of 10 believe better communication is needed between

TYPE OF EQUIPMENT	NEVER DONE	ONE-TIME STUDY TWO OR MORE YEARS AGO	ONE-TIME STUDY WITHIN THE PAST TWO YEARS	STUDY PERFORMED AT LEAST ANNUALLY
Classroom Equipment	59%	9%	12%	21%
Office Equipment	59%	8%	14%	19%
Audiovisual Equipment	46%	10%	13%	32%
Shop Equipment	71%	6%	7%	17%

EXHIBIT 8-25

SCHOOLS CONDUCTING SURVEYS
OF USAGE OF SCHOOL EQUIPMENT

EXPERIENCE	PERCENT OF SCHOOLS
No Problems	31%
Have Experienced Problems	69%
Length of time/late delivery	39%
Difficulties tracing orders	39%
Orders not received/partial receipt	18%
Regional Office staff/staffing	18%
All other problems	18%

EXHIBIT 8-26

PRINCIPALS REPORTING PROBLEMS
WITH PROCUREMENT OF SUPPLIES AND EQUIPMENT

Regional Office staff that handle these orders and the schools (Exhibit 8-27).

The official procurement channels are not the only avenues available to schools to obtain equipment and supplies. Principals can be quite creative, and teachers can be quite generous with out-of-pocket monies; however, booster organizations appear to be the most widespread source of extra-DoDDS materials. A full 84 percent of the school principals surveyed reported that the school, or patrons of the school, had gone to sources other than those officially prescribed to obtain equipment or supplies. The most frequently given reason for doing this was to obtain the materials in a more timely manner (69 percent) or to obtain them at no cost to the school (47 percent). Quality and lower cost were infrequently at issue (18 percent).

The problems of timeliness and incomplete deliveries are reported to vary, depending on the types of materials in question. Home economics supplies, musical instruments, and large shop equipment have both the best and worst track records. The largest proportions of complete orders being delivered by the anticipated delivery date and the largest proportion of no part of the order being received by the anticipated delivery date occurred in these categories of materials. In all but one category asked about, fewer than 2 schools in 10 had received a complete order by the date they anticipated (Exhibit 8-28). In that great disappointment is caused if delivery is anticipated erroneously, principals were asked what their reference points were.

RECOMMENDATION	PERCENT OF PRINCIPALS
No Recommendation	32%
More Direct Processing	38%
Better/More Timely Communication	21%
Vendors in Closer Proximity	12%
Increased Warehousing	9%
Better/More Guidelines	6%

EXHIBIT 8-27

PRINCIPALS' RECOMMENDATIONS
FOR IMPROVING THE PROCUREMENT PROCESS

	PERCENT OF SCHOOLS			
MATERIALS ORDERED	NONE	HALF	NOT ALL	ALL
Textbooks	7%	18%	59%	16%
Workbooks	6%	20%	60%	14%
Library Books	8%	28%	54%	10%
Audiovisual Equipment	6%	22%	52%	20%
Arts and Crafts	8%	27%	51%	14%
Laboratory Supplies	14%	26%	43%	17%
Home Economics Supplies	14%	17%	45%	24%
Large Shop Equipment	26%	15%	38%	21%
Training Aids	5%	22%	63%	9%
Athletic Equipment	11%	22%	52%	16%
Musical Instruments	14%	14%	44%	27%
School Furniture	21%	28%	38%	13%
Routinely Replenished Supplies	4%	24%	59%	14%

EXHIBIT 8-28

PROPORTION OF ORDERS
RECEIVED BY ANTICIPATED DELIVERY DATE

The most frequent answer was the date supplied by the vendor or Regional Office or the date as computed according to instructions in the Materials Management Manual.

Materials Management

Once supplies and equipment have been procured they should be controlled. The generally accepted method for doing this is the inventory. Almost all schools report they do inventory their supplies and equipment. In the area of equipment, 97 percent of the schools report conducting inventories; 93 percent inventory their supplies. The adequacy and accuracy of the techniques schools employ remain an unknown and are school devised. ODS has not issued guidelines for inventories, and no documentation was found at the regional level prescribing how schools should go about doing this.

Once equipment has been procured it must also be maintained. This involves routine maintenance and the repair of machinery that is broken down. These are services to be provided by the cognizant military community as delineated under Interservice Support Agreements. Equipment that is under warranty is to be returned to the manufacturer for repair. Depending on the equipment, this may be a U.S. or host national concern. Other equipment is to be repaired either by military personnel or under repair contracts arranged by the military. Almost all principals have had experience with direct military repair of equipment, three-quarters with host national contracts, and one-half with manufacturer-provided warranty repair. None of these methods appear to be overwhelmingly satisfactory in terms of timeliness; principals were only slightly more satisfied with the quality of repair than with its timeliness (Exhibit 8-29). These data suggest that even though schools may be well equipped, they do not always have full advantage of the equipment in their possession.

Quality and Adequacy of Materials

An impressive 80 percent of school staff believe DoDDS instructional supplies and equipment are equal to or better than what they have experienced stateside. In the area of textbooks, workbooks, library books, media resources, and media equipment, over 80 percent of DoDDS schools were reported to have had adequate or very adequate quantities on hand at the start of the 1982-1983 school year (Exhibit 8-30).* The greatest inadequacy is found in the area of vocational education equipment (47 percent of schools) and computer equipment. But at the time of this study, computer education was not yet a fully implemented DoDDS curriculum. Those schools offering computer education do so using equipment procured outside of regular channels. Principals rate the physical condition of the materials on hand according to the same patterns as they do their quantity.

Students (grades 5 to 12) and teachers concur in the overall adequacy ratings given by the principals. On a scale of 1 to 4,

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*Based on early reports of problems with late deliveries and the early fall scheduling of data collection, the question was also asked for the midpoint of the 1981-82 school year. No difference was found in the response patterns to the two questions.

REPAIR RECORD	MANUFACTURER	MILITARY	HOST NATION
No Repairs by This Method	47%	8%	22%
Have Used Method	53%	92%	78%
TIMELINESS OF METHOD			
Very Satisfied	7%	6%	12%
Satisfied	33%	44%	46%
Dissatisfied	33%	31%	33%
Very Dissatisfied	28%	19%	9%
QUALITY OF REPAIR			
Very Satisfied	13%	5%	13%
Satisfied	47%	50%	56%
Dissatisfied	26%	31%	22%
Very Dissatisfied	14%	14%	8%

EXHIBIT 8-29

SATISFACTION WITH ALTERNATIVE
METHODS OF REPAIRING EQUIPMENT

QUANTITY	VERY ADEQUATE	ADEQUATE	IN-ADEQUATE	VERY IN-ADEQUATE
Basic Texts	50%	41%	8%	1%
Workbooks	37%	48%	12%	3%
Library Books	30%	52%	15%	3%
Supplemental Materials	12%	65%	20%	3%
Media Resources	29%	59%	10%	2%
Media Equipment	34%	54%	10%	2%
Vocational Education Equipment	8%	46%	22%	24%
Computer Equipment	4%	13%	26%	56%
Furniture	10%	68%	18%	4%
Office Equipment	17%	63%	17%	3%
Routinely Replenished Items	15%	70%	12%	2%
PHYSICAL CONDITION				
Basic Texts	38%	53%	9%	0%
Workbooks	32%	54%	12%	1%
Library Books	24%	65%	10%	1%
Supplemental Materials	12%	70%	15%	3%
Media Resources	25%	63%	10%	2%
Media Equipment	30%	56%	12%	2%
Vocational Education Equipment	3%	52%	14%	25%
Computer Equipment	10%	30%	14%	47%
Furniture	8%	66%	20%	5%
Office Equipment	8%	72%	17%	2%

EXHIBIT 8-30

PRINCIPALS' RATINGS OF SUPPLIES
AND EQUIPMENT

ratings by both students and teachers are above the mean of 2.5 in terms of the quality, quantity, variety, and availability of materials and equipment.

Principals in a position to judge say there is variation both across regions and across schools within the region in the availability of equipment and materials for student use. When the data reported by teachers are examined by region they support this perception (Exhibit 8-31). Quality is the factor most comparable across regions but not as comparable as would be expected given the DoDDS curriculum development plan and procurement policies that standardize the textbooks and equipment that can be ordered. Differences are more marked in the quantity, variety, and availability aspects that are more subject to regional policy and budget levels. Teachers in Panama tend to rate their instructional materials slightly higher than teachers in other regions; teachers in the Atlantic rate their materials slightly lower.

Under the Five-year Curriculum Development Plan textbooks and supplemental materials are ordered and financed at the worldwide level during the year of implementation. Principals need not budget for this replacement of instructional materials. There are reported instances of this process resulting in excesses, since the quantities ordered are based on school enrollments and ratios, not on how programs are operated at specific schools. The data suggest (Exhibit 8-32) this may indeed have happened in the cases of mathematics and music, where teachers report quantities of instructional materials that are

	QUALITY	QUANTITY	VARIETY	AVAILABILITY
All Regions	3.1	2.8	2.8	2.7
Germany-North	3.2	2.9	2.9	2.8
Germany-South	3.1	2.7	2.7	2.6
Atlantic	2.9	2.6	2.5	2.3
Mediterranean	3.1	3.0	2.9	2.7
Pacific	3.0	2.6	2.6	2.7
Panama	3.4	3.1	3.0	2.8

4-point scale

EXHIBIT 8-31

TEACHER MEAN RATING OF INSTRUCTIONAL
SUPPLIES AND EQUIPMENT

PROGRAM BY YEAR CURRICULUM IMPLEMENTED		PERCENT REPORTING		MEAN RATING* OF MATERIALS	
		INSTRUCTION MATERIALS LESS THAN 5 YEARS OLD	EQUIPMENT LESS THAN 5 YEARS OLD	QUALITY	QUANTITY
1977	Health	59%	68%	2.7	2.6
	Physical Educ.	73%	63%	2.8	2.5
	Social Studies	66%	62%	2.9	2.7
1978	Career Education	80%	76%	2.9	2.6
	Language Arts	70%	71%	2.8	2.7
1979	Science	76%	71%	2.9	2.8
	Special Education	77%	80%	3.1	2.8
	Compensatory Educ.	92%	90%	3.0	2.6
	Career Education	80%	76%	2.9	2.6
1980	Mathematics	87%	83%	3.2	3.0
	Special Education	77%	80%	3.1	2.8
	Compensatory Educ.	92%	90%	3.0	2.6
	Career Education	80%	76%	2.9	2.6
1981	Music	92%	82%	3.3	3.0
	Arts & Humanities	93%	71%	3.2	2.8
1982	Foreign Language	87%	72%	3.4	2.7
	Vocational Educ.	79%	53%	3.1	2.5

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*4-point scale

EXHIBIT 8-32

CONDITIONS OF INSTRUCTIONAL
MATERIALS AND EQUIPMENT COVERED BY THE
FIVE-YEAR CURRICULUM DEVELOPMENT PLAN

more than adequate (mean ratings of 3.02 and 3.03 on a 4-point scale). Schools themselves may be over-ordering in some subject areas, particularly reading, where one in three teachers reported instructional materials to be more than adequate in terms of quantity.

Many schools appear to be depending on the Five-Year Curriculum Development Plan to replenish supplies. Four out of 10 schools have not secured new materials for their health programs since the health curriculum was implemented. Although subject areas vary, the curriculum development cycle appears to be instrumental in the acquisition and replacement of supplies.

The first line of decision making regarding educational equipment is with the principal. With input from the teachers and within the budget authorized by ODS and the region, principals determine what equipment will be ordered. With the exception of career education and vocational education, which depend more on heavy equipment than do other subjects, principals rate the quantity available toward the more than adequate side of the scale (Exhibit 8-33). Even with vocational education and career education, the quantity of equipment is given ratings above or equal to the mean of the scale used; however, in 4 out of 10 schools offering these programs the principal perceives an inadequate quantity of equipment. It is possible that when decisions are made within schools' budgets, the more costly programs do not receive equal treatment.

	QUALITY OF EQUIPMENT		QUANTITY OF EQUIPMENT
SUBJECT AREA	PRINCIPALS	TEACHERS	PRINCIPALS
Vocational Education	2.8	2.8	2.6
Career Education	2.7	3.0	2.5
Physical Education	2.9	2.6	2.9
Music	3.1	3.1	3.0
Science	2.8	2.8	2.9
Mathematics	3.2	3.0	3.1
Social Studies	3.1	2.8	3.2

4-point scale

EXHIBIT 8-33

MEAN RATING OF SCHOOL STAFF
REGARDING AVAILABILITY

SUMMARY AND RECOMMENDATIONS

The Major Construction Program

DoDDS is taking an organized approach to upgrading the most inadequate of its facilities. The process is a centralized one that has essentially delegated only design to the regional level, while providing philosophical and some procedural guidance.

Any changes that would be recommended in this area are at the margins of the process, representing refinements. For example, the square footage allowances in effect are now seven years old, and there is evidence that these allowances may be limiting to high schools and small schools. DoDDS currently entertains requests for waivers of these standards. ODS should review the criteria and consider developing alternative criteria or ranges, specifically to accommodate small schools. DoDDS is a system with many small schools. Such alternatives as opposed to case-by-case waivers would help further ensure equity in the construction program.

The philosophy of participation in the development of educational specifications and involvement of educators in all decision-making stages might be further emphasized. There is currently no evidence to demonstrate problems resulting from the limited involvement of educators in planning; however, such problems would not surface for several years given the number of years required for planning, design, construction and occupation of school buildings.

The process as it is carried out at the regional level would benefit from some improvement in communications between ODS and the Regional Offices. Specifically, regional facilities specialists might be better able to deal with and resolve pressures from the military communities with which they deal if they were involved more immediately in prioritizing and budget allocation for the worldwide construction program, better informed of the congressional MILCON budget process, and briefed on the how and why of decisions made at ODS.

Minor Construction, Repair, and Maintenance

The military engineering offices, on which schools depend for minor construction repair and maintenance, operate according to DoD resource management regulations, which require forward planning and scheduling. DoDDS has not formally implemented a planning program; thus, what planning occurs is discretionary and undertaken according to methods and procedures agreed to between school principals and engineers. Principals complain they do not receive timely services. Engineers manage their offices in such a way that staff are not available to respond to short-term requests, other than emergencies. Systemwide guidance, bringing DoDDS into conformance with the system on which it depends, is seen as one means of improving those services. DoDDS has prepared such procedures and is responding to comments from the services. It is expected they will be incorporated in DoD Manual 1342.6-M-1 and dissaeminated at the start of the 1983-84 school year. We recommend that persons knowledgeable in such procedures, with the interest of the schools their primary objective, be available to assist and advise each school individually to ensure full and satisfactory implementation.

Further improvement in services might also be recognized if there were standard procedures for monitoring. Current methods to ensure that schools are receiving the services they are authorized to receive are lax. School principals and complex coordinators have no specific guidance as to how they should go about doing this, and the branches of service are under different guidance as to how to report (voucher) the services provided. It may be that such monitoring is a function best served above the school or school complex level where comparative data would be available for evaluation, yet not at an administrative level as far removed as the Regional Office. Intermediate level monitoring would minimize the administrative burden on principals and alleviate the need to train all DoDDS principals in logistical technicalities. By locating the function below a regional level, it would be possible to give greater and more individualized attention to what is happening at each school or in different communities.

The current approach to funding the minor construction program only adds to delays in undertaking new projects. By using the approach now employed in the major construction program which separates the authorization of design and execution funds, engineering offices could be more responsive to schools' needs. As the minor construction program now operates, design for DoDDS projects does not begin at most military installations until construction funds are authorized, with contractors identified after that point. Combined with the recent experience that such funds are not authorized until late in the fiscal year, the minor construction program ends up out of synchronization with the school year and the desire to undertake the construction during the summer months. It is also not uncommon for funds to be received too late to be fully committed and thus lost at the end of the fiscal year.

The General Accounting Office recommendation that DoDDS return to reimbursing the services rather than authorizing them to charge DoDDS' funds directly is reinforced by the findings of this study. DoDDS has indicated that they are returning to a reimbursable system.

Supplies and Equipment

While there has been significant improvement in the procurement processes and procedures used by DoDDS in recent years, there is room for more improvement. Practices of making procurement decisions at regional and ODS levels (when they are not given information by schools) are questionable, as they appear to result in inequitable distribution of some resources.

Earlier problems of system breakdowns at the DGSC level do appear to be resolved. The bottleneck has been moved to the regional level. This may still be too far removed from the schools to provide the individualized attention necessary when problems due to late, incomplete, or erroneous deliveries are encountered. Procurement may benefit by having decision making and operational functions located organizationally closer to the schools and by ensuring that the persons involved in the process are qualified to undertake the task at hand. This conclusion coming out of the Comprehensive Study is different from that reached by DoDDS and leading to the plans for a centralized ordering system. It is recommended that the BOSS system be rigorously evaluated once it has been implemented.

Lacking an inventory system, DoDDS does not know what equipment it owns, although it does know what has been placed in the schools. While this information need not reside at a worldwide level it should be routinely available within the system. It should also be available in a standardized manner to permit periodic systemwide assessments of status. At a minimum, the conduct of inventories following procedures that should be developed by ODS and recognized as managerially sound should be required of all schools.

The information gathered as part of this Comprehensive Study suggests that there may be some inequity in the distribution of resources across schools and across regions. More detailed analyses of the decision making and funds management regarding supplies and equipment are required to fully understand the reasons behind these differences.

CHAPTER 9

PUPIL TRANSPORTATION

OVERVIEW OF THE TRANSPORTATION SYSTEM

The transportation of pupils to and from school, on field trips, and to extracurricular events is a service provided to DoDDS on a reimbursable basis by the military communities in which the schools are located. As indicated in Exhibit 9-1, principals overwhelmingly report that the manner in which these services are provided is either satisfactory or very satisfactory. Some variation occurs in the provision of services across regions, most notably in regard to reliability (Exhibit 9-2).

Seven of every 10 principals report that these services are fully supportive of the school's ability to offer a full educational program and to make that program available to all students. Outside of the core educational program, transportation services are reported as supportive of field trips at 6 of every 10 schools and of extracurricular events at only one-half of the schools.

DoD has delegated responsibility for school bus safety to the installation commander providing the service and not to DoDDS. While the data indicate safety to be satisfactory at 86 percent of schools, there is room for concern in this area; 14 percent of DoDDS bus riders use transportation services at the 16 percent of schools where principals rated safety as unsatisfactory or very unsatisfactory. Roughly the same percentages reappear in the response of transportation officers to the query

PERCENT OF SCHOOLS	VERY SATISFACTORY	SATISFACTORY	UNSATISFACTORY	VERY UNSATISFACTORY
Safety	28%	57%	10%	6%
Quality	32%	62%	6%	1%
Reliability	36%	57%	5%	2%
Adequacy	32%	61%	6%	1%
PERCENT DISTRIBUTION OF BUS RIDERS				
Safety	31%	55%	8%	6%
Quality	42%	54%	4%	0%
Reliability	41%	55%	2%	*
Adequacy	34%	54%	12%	0%

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*Less than 0.5%.

EXHIBIT 9-1

PRINCIPALS' RATINGS OF TRANSPORTATION SERVICES AND PERCENT DISTRIBUTION OF PUPILS RIDING BUSES

	SAFETY	QUALITY	RELIABILITY	ADEQUACY
ALL REGIONS	3.1	3.2	3.2	3.2
Germany-North	3.0	3.2	3.0	3.1
Germany-South	3.0	3.2	3.0	3.2
Atlantic	3.0	3.2	3.2	3.2
Mediterranean	3.0	3.3	3.4	3.1
Pacific	3.3	3.4	3.6	3.6
Panama	3.2	3.2	3.4	3.4

4-point scale.

EXHIBIT 9-2

PRINCIPALS' MEAN RATINGS OF PUPIL TRANSPORTATION
SERVICES BY REGION

regarding how frequently they conduct required reviews of safety with 15 percent not conducting reviews of vehicles and 19 percent not conducting reviews of school bus loading and unloading areas. Systemwide, vehicle reviews are on the average conducted once a month, and reviews of loading/unloading areas twice a month.

Local level military transportation officers and school principals typically confer to project the school's needs for transportation. This information is channeled up to Regional Office and Command levels by the military where Interservice Support Agreements are generally negotiated. The school system provides the busing requirements, the military estimates costs.

At the local level, transportation decisions are guided by policy that describes eligibility for busing and the requirement that busing services be provided at least cost. Techniques available to control costs include examination of alternative methods of providing services (e.g., contract vehicles and/or personnel vs. military vehicles and/or personnel) coordinating bus routes across schools, monitoring the number of students traveling individual routes, and establishing a commuting area beyond which parents must arrange for transportation.

THE COST OF STUDENT TRANSPORTATION

Given that DoDDS's daily commute and field trip transportation costs account for 10 percent of the total budget (as opposed to an estimated stateside average of 5 percent for 1982-83), DoDDS must watch these services carefully. In conjunction with the military services, DoDDS has undertaken a program to encourage use of economies. A detailed study has been fielded to assess whether the most cost-effective means is being used at individual commands. The utility of this study to those beyond the community for assessing effectiveness has, however, been hindered by the use of noncomparable data. The noncomparability of information has been reported as a problem encountered by DoDDS complex coordinators and business managers attempting to assess the efficiency with which bus services are being provided.

This was also a problem within the scope of the current study. Lacking standardized information keeping and reporting, the data collected within the framework of the Comprehensive Study are limited and subject to numerous constraints. For example, mileage figures are understated in that they do not reflect the miles clocked on field trips; some communities do not charge DoDDS for buses traveling limited distances. The data, nevertheless, do provide the opportunity to examine expenditures in this area.

Exhibit 9-3 provides a comparison of average stateside transportation costs with those of DoDDS. The most current data available on stateside student transportation are for the 1979-80 school year. These data have been adjusted using the Public Transportation component of the Consumer Price Index. This component includes salaries, maintenance, fuel, and replacement costs. 1979-80 data have been adjusted to reflect change between the average CPI for the period September 1979 through August 1980 to the full year CPI for 1982.

		STATESIDE	
	DoDDS 1982-83	ACTUAL 1979-80	ADJUSTED TO 1982
Transportation Budget ($000)	$44,242	$3,833,145	-
Percent of Total Current Expenditures	10%	4%	5%
Total Annual Miles (000)	22,541	2,831,824	-
Total Pupils Transported	81,257	21,468,044	-
Percent of Total Pupils	60%	56%	-
Annual Miles Per Pupil	277	132	-
Cost Per Mile	$1.96	$1.35	$2.00
Cost Per Pupil Transported	$544	$179	$265

Source: Survey of DoDDS School Principals, National Center for Education Statistics, Consumer Price Index for Public Transportation.

EXHIBIT 9-3

COMPARISON OF DoDDS PUPIL TRANSPORTATION COSTS
WITH NATIONWIDE STATESIDE AVERAGE COSTS

As noted previously, the proportion of the budget for current operations earmarked for pupil transportation is twice as high within DoDDS as the stateside national average. The proportion of the budget expended on pupil transportation is related to several variables. Among these are the proportion of enrolled students using the bus service, the miles traveled per student, variations in the cost of fuel, and the salaries that can be negotiated for drivers and maintenance crews.

Data are not available that would permit comparisons of stateside salaries for transportation with DoDDS. However, in some countries in which schools are located (most notably Germany) employee benefits for those hired through the local economy exceed those of American nationals, thus inflating this component of costs above stateside experience. Data available on fuel costs (for countries where 85 percent of the schools are located) indicate that three-quarters of all DoDDS schools are in countries where diesel fuel, purchased on the local economy, is more expensive than that available through the U.S. economy. To the extent that contracted bus services include fuel costs in these countries, DoDDS transportation costs are being driven higher than stateside experience. There are no data indicating how much of the fuel used to transport DoDDS commuters is being purchased locally.

While 22 states transport a larger proportion of their students than does DoDDS, and 3 states transport them farther, no state transports a larger percentage of its students greater distances than DoDDS. States that most closely approximate DoDDS in this respect are Iowa, Kansas, Montana, and Wyoming. The transportation costs in these four states are compared with DoDDS costs in the first part of Exhibit 9-4. DoDDS transports 128 percent as many pupils as these states (on average) with the average DoDDS bus rider traveling 119 percent as many miles as the average rider across these 4 states. DoDDS costs per pupil and costs per mile, however, are 147 percent and 130 percent, respectively, of the average in these states.

There is a general tendency stateside (though not absolute) for the cost per mile to decrease as the per pupil mileage increases. Kansas, Montana, Nebraska, South Dakota, and Wyoming are most like DoDDS in terms of cost per mile and mileage per pupil. DoDDS transports its bus riders 103 percent as many miles as these 5 states do, on average; however, DoDDS does so at 128 percent the cost per mile. While DoDDS's transportation burden is higher than typical stateside experience, the higher percentage of current revenues spent on transportation does not appear to be totally explained by the greater per-pupil mileage.

USE OF SCHOOL BUSES

Bus transportation services are nearly universally utilized in the DoDDS setting. Fewer than 4 percent of the schools do not use buses to assist in pupils' daily commutes. Among students interviewed, 52 percent report using school buses as their primary mode of transportation to and from school. High schools serve larger areas than elementary schools and, as would be expected, a higher proportion of students in grades 5 through

				ADJUSTED* COST	
	% OF PUPILS TRANSPORTED	MILES PER PUPIL	% OF CURRENT EXPENDITURE	PER PUPIL BUSED	PER MILE
DoDDS	60%	289	10.3%	$544	$1.96
Average: 4 States	47%	243	4.8%	$369	$1.51
Iowa	49%	230	4.3%	$305	$1.33
Kansas	43%	252	5.3%	$400	$1.58
Montana	50%	249	4.9%	$395	$1.58
Wyoming	46%	240	4.6%	$374	$1.55
DoDDS/4-State Ratio	128%	119%	215%	147%	130%
Average: 5 States	41%	281	5.0%	$429	$1.53
Kansas	43%	252	5.3%	$400	$1.58
Montana	50%	249	4.9%	$395	$1.58
Nebraska	26%	326	4.7%	$564	$1.73
S. Dakota	38%	338	5.5%	$412	$1.21
Wyoming	46%	240	4.6%	$375	$1.55
DoDDS/5-State Ratio	146%	103%	206%	127%	128%

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*Stateside data for 1979-80 adjusted to the Consumer Price Index for Public Transportation.

EXHIBIT 9-4

COMPARISON OF DoDDS TRANSPORTATION COSTS
WITH THOSE OF SELECTED STATES

12 report riding buses (51 percent) than students in the lower grades (40 percent).

The degree to which parents depend on school buses to carry their children varies by region, with 8 out of 10 students riding the school bus in the Pacific, Mediterranean, and Atlantic. In Germany-South and the Pacific, the proportion is 6 out of 10. Germany-North has the lowest incidence of school bus usage, with 5 out of every 10 students using this mode of transportation.

Overall use of school buses for commutes to and from school approximates the nationwide average for stateside school systems. DoDDS students, however, cover much greater distances than the typical stateside student. The average DoDDS student spends 24 minutes on the bus in the morning and again in the afternoon. Students in Germany-North, Germany-South, and the Pacific reported spending the longest time on the bus. A one-way commute in these regions is on the average eight minutes longer than the commute in the Mediterranean and the Pacific (Exhibit 9-5). As may be expected, some students spend as little as five minutes or less on the bus. The longest time reported in the survey data was 160 minutes in a 1-way commute.

DoD regulations specify that principals and installation commanders are to define an outside perimeter for school bus pickup. Factors to be considered when establishing boundaries include availability of housing in proximity to the school and elapsed travel time via other available modes of transportation.

	ONE-WAY COMMUTE
ALL REGIONS	24 Minutes
Germany-North	28 Minutes
Germany-South	28 Minutes
Atlantic	20 Minutes
Mediterranean	20 Minutes
Pacific	29 Minutes
Panama	*

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*Sample size inadequate to generalize.

EXHIBIT 9-5

AVERAGE TIME SPENT IN A ONE-WAY SCHOOL BUS COMMUTE

Those residing outside of this area are responsible for getting the child to a pickup point or to the school itself. Four out of 10 schools report that some families live outside of the commuting area, and 14 percent of the parents interviewed reported that their children spend additional time in commuting. Among children of these parents an extra 30 minutes is spent getting to the school bus pickup point. This is a situation encountered somewhat more frequently by parents assigned to Germany than among those stationed in other DoDDS regions. In Germany about 20 percent of parents reported their children depend on more than just the DoDDS bus to get to school. Some cases of this situation were reported in the Atlantic (11 percent) and Mediterranean (6 percent). None of the parents interviewed in the Pacific and Panama reported use of multiple modes of transportation. Conversations with parents assigned to Germany outside of the representative survey indicated on-base housing shortages and the nonreceptivity of some German communities can be the deciding factor when housing decisions are made. Some, thus, may not have the choice to live within the commuting area established by the school principal and community commander.

Three-quarters of these parents, evenly distributed across all military services, reported being aware of the necessity for their children to use a means of transportation other than the school bus when they moved into their current housing. This suggests that while the commuting area imposed by DoDDS and DoD regulations results in some students being inconvenienced, the system in three out of four cases is providing adequate information to parents before they make housing decisions.

Among the DoDDS students not using the buses, 83 percent walk to school, while another 9 percent live too close to the school to qualify for DoDDS subsidized transportation but are using means other than walking. Three-quarters of the parents driving their children to school reported no inconvenience.

DISCIPLINE ON THE BUSES

Twenty-four minutes is a long time for children to be confined in a limited space, and fully half of the older students interviewed rated discipline on their buses as poor to very poor (52 percent). The noise level (15 percent), standing up (18 percent), and more serious behavior such as fighting and indecency (23 percent) were cited by the older students as being problems on their buses. The younger students were also encouraged to talk about their school bus rides. All but 11 percent like riding their school buses. Those who do not complained about the noise. Informally, teachers and administrators reported that the problems occurring on buses are oftentimes carried into the school either through early morning hyperactivity on the part of younger students or eruptions of violence among those older ones seeking to resolve arguments begun on the way to school.

Under DoD regulations it is the local commander who is responsible for the development and enforcement of standards of student behavior on buses. Comparable with many stateside systems' policies, neither DoDDS nor the military is authorized to hire or pay individuals to monitor student behavior on school buses. The exception to this is in one country where host national laws require monitoring. Approximately two-thirds (68 percent) of students in grades 5 to 12 are unmonitored on their daily commutes to and from school, regardless of the amount of time they spend on the school bus (Exhibit 9-6). Monitors are almost unknown in Germany, where only 2 students in 10 ride a monitored bus. Half of all bus riders are monitored in the remaining regions.

Among students reporting discipline as good or very good on their buses, most attributed it to control by the bus driver or monitor. On buses transporting DoDDS students it is not as easy to assume that drivers will take responsibility for discipline as it is stateside. All students sampled reported their drivers to be host nationals. Driving skills, as demonstrated by the ability to pass driving tests in host nations--not fluency in the English language--are the criteria used by the military and bus contractors in their selection. Four out of 10 principals saw this lack of English proficiency as being something more than a minor problem at their schools.

Of the 32 percent of students in grades 5 to 12 riding on the buses that do have monitors, half reported that parents assume this responsibility. Exhibit 9-7 identifies the other types of individuals that fill this role for the remaining 17 percent of bus riders. Where host nation laws do not require bus

	ALL BUSED STUDENTS	MONITORED STUDENTS	UNMONITORED STUDENTS
ALL STUDENTS	100%	32%	68%
5-15 minutes	37%	15%	22%
16-30 minutes	42%	10%	32%
31-45 minutes	8%	2%	6%
More than 45 minutes	13%	5%	8%

EXHIBIT 9-6

DISTRIBUTION OF MONITORED BUS
RIDERS BY TIME SPENT IN ONE-WAY COMMUTE

	PERCENT
Interviewed Students Bused	51%
Bused Students Monitored	32%
Bus Riders Monitored by	
Parents	55%
Students	15%
Host country nationals	15%
U.S. military personnel	5%
Other	10%

FIGURE 9-7

PERCENT OF GRADE 5 TO 12 STUDENTS
HAVING BUS MONITORS

monitors, this role is served on a voluntary basis, is a duty required of parents by community commanders, or is paid for through voluntary organizations in the community.

Half of the parents interviewed whose children are unmonitored (48 percent) saw this as a problem ranging in magnitude from minimal (7 percent) to great (41 percent). The data suggest the level of parental concern is not a function of grade level. Parents voiced concern in roughly equal proportions, whether their children were in elementary, middle, or high school. Parents residing in the Mediterranean were more positive toward safety than those in other regions. In the Mediterranean 7 out of 10 saw the buses as safe even when they lack monitors. Those in the Atlantic were most concerned, with 7 out of 10 seeing a definite problem and unsafe conditions stemming from lack of bus monitors. In the remaining regions parents were evenly divided in their assessments of the safety of this situation.

Problems occurring on school buses (as reported by students, parents, teachers, or members of the community) are channeled through the principal to the military transportation officer. Principals reported an even greater need for monitors than did parents. While half of the parents in the sample whose children ride buses saw no problem, due to the absence of monitors, the data below indicate that principals have definite opinions regarding the need for monitors:

Great Need	40%
Moderate Need	24%
Small Need	21%
No Need	14%

When this issue was addressed in greater depth with selected principals, transportation officers, and community commanders, they noted problems in getting volunteer programs to fill the gap. Individual communities are addressing the issue in a variety of ways. Some encourage residents of the community to ride the buses to and from work on a space available basis; in others, booster clubs foot the bill for salaried monitors.

SUMMARY AND RECOMMENDATIONS

In any examination of the issues of bus monitoring it is essential to keep the overall picture in perspective. During the 1982-83 school year slightly more than 40 percent of all DoDDS students were riding unmonitored school buses. Twenty percent of the parents of all DoDDS students were concerned about their safety on these unmonitored buses, and were vocal about their concern.

A systemwide-funded school bus monitoring program does not appear to be justified, although a monitoring program designed to alleviate the specific problems being experienced does appear to be justified. The criteria under which monitors may be hired should be relaxed. For example, DoDDS might fund monitors on a country-specific basis or where elementary and secondary students share buses. Additionally, volunteer monitoring programs should be actively encouraged as systemwide policy. Local communities and the schools might be assisted in this through dissemination of information on how successful volunteer programs operate in different settings.

Despite limitations in available data, there is evidence that costs of transporting DoDDS daily commuters may be higher than necessary. Although transportation services are provided through the military, accountability for the funds spent on transportation rests with DoDDS, which should continue to expand its current efforts to control costs in its transportation program. Systemwide policies, and not those of the services, are needed as a first step in this process. To accomplish this, DoDDS will require the support of DoD in developing, promulgating, and enforcing policies. Standardized accounting practices are being implemented which will permit examination of costs across communities. Only through such comparisons will it be possible to identify excessive costs and to take appropriate action. At the time of this study, DoDDS-wide there were only three positions (including one at ODS) filled with people qualified to evaluate transportation programs. Local school bus routes, the pack of individual buses, and the efficiency of decisions regarding contract vs. direct hire of drivers at 269 schools cannot reasonably be monitored from Washington. ODS reports systems to control and monitor costs and the personnel to do so currently are being put in place.

CHAPTER 10

OTHER ASPECTS OF SUPPORT

Many of the functions associated with resource management and maintenance come under the purview of the community commander. Maintenance and repair of school facilities, custodial services, transportation services, and maintenance of equipment discussed in earlier chapters are only part of the picture. The DoDDS school, through its dependencies, has very close ties with the military community in which it is located. The community commander is specifically charged to provide administrative and logistics support to the DoDDS activities. Almost all of these services are provided on a reimbursable basis and involve administrators working directly with representatives of the military community to ensure that the support received is responsive to school needs. Among these services, student feeding is somewhat unique in that it is exclusively the responsibility of the military community to arrange for such programs. Congress has called for committees to be established at several levels to advise school administrators and the military commanders on issues concerning dependents' education. Additionally, commanders are to assign a member of their staff to the liaison role of Schools Officer. This chapter reviews these various support arrangements and the manner in which they are operating.

GENERAL SUPPORT OF THE MILITARY COMMUNITIES

It can be hypothesized that one factor in the complex support system of a DoDDS school is the relationship that exists between the key actors. Several questions were asked of the school principals and community commanders who were interviewed as a means of examining the environment in which services are provided. When encouraged to talk about the community commander's relationship with the school, 86 percent of the principals were definitely positive. Terms such as interested (46 percent), supportive (46 percent), cooperative (14 percent), and available (11 percent) were most typical of those used (Exhibit 10-1). On a 5-point scale of satisfaction the mean score given by principals was 4.3.

Regrettably, the services provided by these communities do not all rate as high as the attention the commanders give to the schools. Transportation, repair, maintenance, and minor construction services, given the percentage of the DoDDS budget which they consume, have been singled out for extended discussion in earlier sections. Exhibit 10-2 provides a comparison of the overall ratings given these services by principals with those they give to other services provided under the auspices of the military. The data are based on a 4-point scale where a rating of 4 is very satisfactory and 2.5 represents a mean score. Mail services are the only services rating below this mean, although when specific problems are brought to the attention of the responsible office, satisfaction is achieved. All other services rate above the mean, though only protective services and transportation begin to approach the very satisfactory mark.

DoDDS principals tend to be in fairly frequent contact with the community commanders, 22 percent on a weekly basis and

DESCRIPTION OF COMMANDS	PERCENT OF PRINCIPALS
Interested	17%
Highly Interested	29%
Supportive	20%
Very/Highly Supportive	26%
Cooperative	9%
Very/Highly Cooperative	6%
Always Available	11%
Other Positive Terms	26%
Neutral	6%
Negative Terms	6%

EXHIBIT 10-1

TERMS USED BY SCHOOL PRINCIPALS TO DESCRIBE
COMMUNITY COMMANDERS' ATTITUDES TOWARD THEIR SCHOOLS

TYPE OF SERVICE	OVERALL RATING OF SATISFACTION	RESPONSIVENESS TO PROBLEMS
Transportation	3.2	3.2
Repair/Maintenance	2.8	2.9
Community Services	3.1	3.0
Protective Services	3.3	3.2
Safety	3.0	3.0
Heating and Cooling	3.1	3.1
School Lunch	2.5	2.6
Medical Services	2.7	2.8
Communication Services	2.7	2.8
Mail Service	1.8	2.8

4-point scale.

EXHIBIT 10-2

PRINCIPALS' MEAN RATINGS OF LOGISTICS SUPPORT SERVICES PROVIDED THROUGH THE MILITARY another 27 percent at least twice a month. The frequency of contact is not a predictor of the principals' satisfaction with the maintenance services received by the school.

The general satisfaction that principals express regarding their relationships with community commanders leads one to surmise that the problems they bring are dealt with appropriately, since most of this contact is prompted by problems. Principals report they contact the community commander only when necessary (36 percent of principals) or when they have a problem (44 percent). Other reasons given for contacting commanders are to attend scheduled meetings (14 percent), to discuss plans affecting the school (14 percent), and to obtain information (19 percent).

DoDDS principals appear to value involvement with the military community and its representatives. Eight out of 10 principals interviewed reported engaging in some specific activity in order to "stay close" to the military community. Use of formal lines of communication such as attendance at the commander's staff meetings and keeping the commander's staff informed were the most frequently reported practices. Attendance at the military community's social service functions and participation in community social functions were the next most frequently mentioned practices (Exhibit 10-3).

The typical commander interviewed also reported keeping informed of school activities. Exhibit 10-4 summarizes the frequency with which community commanders are briefed on school-related programs and problems. Fully half are briefed by their

PRACTICES TO STAY CLOSE TO COMMANDER	PERCENT OF PRINCIPALS
Do Nothing Specific	16%
Attend Staff Meetings	23%
Keep Commander's Staff Informed	23%
Participate in Social Service Functions	18%
Attend Social Functions	18%
Through the SAC	15%
Send Commander School Newsletters, etc.	13%
Other Social Contact	13%
Attend Military Functions	8%
All Other Practices Reported	18%

EXHIBIT 10-3

PERCENT OF PRINCIPALS USING SPECIFIC PRACTICES
TO STAY CLOSE TO THE MILITARY COMMUNITY

FREQUENCY OF BRIEFINGS	COMMANDER'S STAFF	DoDDS STAFF	SAC MEMBERS
More Often Than Weekly	18%	3%	6%
Weekly	35%	27%	6%
Twice a Month	6%	6%	3%
Monthly	9%	18%	41%
Every Six Weeks	3%	15%	12%
Twice a Year	3%	9%	0%
As Required	12%	9%	12%
Seldom or Never	15%	12%	19%

EXHIBIT 10-4

FREQUENCY OF COMMUNITY COMMANDER
BRIEFINGS ON SCHOOL ISSUES
CONDUCTED BY DIFFERENT TYPES OF PERSONS

staff at least weekly. However, some commanders assume a more removed position from the schools. Approximately 2 out of 10 report receiving briefings on school topics twice a year, seldom, or never. The reasons behind the infrequency of briefing were not pursued.

In addition to the community commander, the role of Schools Officer has been created to provide a link between the school and the military system on which the school depends. Each community commander is to appoint a staff member to serve as Schools Officer, acting as liaison between school and military community. By definition this is a role that could be particularly important in the area of support services. Four of the schools visited reported having no Schools Officer for various extenuating reasons.

At 27 percent of the schools the principals reported that although a Schools Officer had been designated, he or she was not involved with the school. Another 33 percent rated the officer as neither involved nor uninvolved. Despite this relatively low frequency of involvement, principals are satisfied (82 percent) with their Schools Officer. As reported by community commanders, Schools Officers spend few of their working hours dealing with school matters (Exhibit 10-5). Perhaps, given the overall satisfaction of principals, and the low involvement, the time spent attending to school issues is well directed and results in satisfactory outcomes. The data show very low correlations between the presence of maintenance problems and the time the

TIME SPENT ON SCHOOL ACTIVITIES	PERCENT OF COMMANDS
5 percent of time or less	31%
10 percent of time	14%
15-20 percent of time	11%
40-50 percent of time	6%
98-100 percent of time	23%

EXHIBIT 10-5

PERCENT OF TIME SCHOOLS
OFFICERS DEVOTE TO SCHOOL ACTIVITIES

Schools Officer devotes to the school (r=0.08) or between the severity of problems and the time the officers devote (r=0.28).

The principals recognize the Schools Officer as the liaison between school and military (58 percent). Further, 36 percent of the principals interviewed view this individual as a facilitator and point of contact in regard to the support services the school is to receive from its cognizant community. Other functions in which Schools Officers become involved are provided in Exhibit 10-6.

STUDENT FEEDING PROGRAM

Provision of meals to students during the course of the school day is a service provided by the military without involvement of the DoDDS system. Unlike stateside school systems, DoDDS has no authorization to provide a student meal program. Whether or not meals will be available to students during the school day is discretionary on the part of the military community in which the school resides. These programs, where they are elected, are to be self-sustaining and are not subsidized by DoDDS or the military community. The meal services are arranged through the food services organization serving the installation. The rationale is that DoDDS is in the business of educating children; feeding responsibilities fall outside of this mandate.

One reason for the decision to take this position may be the fact that many of the schools, built when the military had responsibility for overseeing the construction program, lack lunch facilities. Slightly less than half of the schools (46

FUNCTION	PERCENT OF COMMANDS
Liaison between School and Military Community	58%
Point of Contact to Facilitate Military Support Services	36%
Advisor on Military Technicalities and Protocol	6%
Organizes School Activities	9%
Handles Transportation Services	18%
Handles School Lunch Program	9%
Handles Budgetary Matters	6%
Other	24%
No Schools Officer	12%

EXHIBIT 10-6

FUNCTIONS SERVED BY SCHOOLS OFFICERS

percent) have on-site cafeterias. The current construction program recognizes this as a problem, and ODS requires all new school construction, major renovation, or expansion projects to include plans for a cafeteria. During the 1983 fiscal year a portion of the minor construction, repair, and maintenance budget has been set aside for installation of cafeterias.

Three-quarters of all schools currently have some arrangements in place for providing lunch to children during the course of the school day. In buildings without cafeterias or multipurpose rooms where meals can be served, students may take their lunch at the base/PX cafeteria, the Officers and NCO Clubs, or the Dependents Youth Activity. Where schools have no on-site capacity for food preparation, hot or cold meals are brought to the school.

Parents of somewhat more than half of the students having experience with lunch programs at DoDDS schools are displeased with those services, giving a rating of D or F. Reasons cited by parents for this rating include lack of hot meals, the quality of the food served, and the time allowed for lunch breaks (Exhibit 10-7). Older students were somewhat less critical of the program. The mean score they gave the food service (2.7) fell above the mean of the scale (2.5), whereas the score given by parents (2.1) fell substantially below the scale mean (3.0). Students, however, based their impressions on the quality of food preparation and variety of foods only, not considering broader issues, as their parents did.

REASON FOR RATING	PERCENT OF PARENTS RATING D OR F
No Hot Lunch	39%
Quality of the Food	25%
Low Nutritional Value	7%
Junk Food Available	8%
Quantity	10%
Too Little Time for Lunch	12%

EXHIBIT 10-7

REASONS FOR PARENTAL CRITICISM OF
THE SCHOOL LUNCH PROGRAM

The student meal program was among those aspects of the system most frequently reported by parents as the biggest problem with which the schools must deal. With 14 percent of all parents reporting this problem, it was exceeded only by parental concern over funding (16 percent). Parents surveyed at elementary schools reported the school lunch program as the major problem (18 percent) more frequently than did parents with children in middle schools (12 percent) or high schools (6 percent). A higher proportion of enlisted personnel (16 percent) were concerned than officers (8 percent), or nonmilitary families (12 percent).

Current legislation allows eligible DoD dependents to participate in the U.S. Department of Agriculture's [USDA] free and partially subsidized school feeding program. This participation is discrationary and must be negotiated between the military community in which the school is located and the food service organization serving that community. Half of DoDDS schools report participation. Nothing is known about those DoD communities that do not participate in the USDA's program. Some may lack the facilities to participate, while some may have no or few families meeting the eligibility criteria for free or reduced-price lunches.

The incidence of student participation is lower in DoDDS than it is stateside. While DoDDS students represent about 3 percent of all the nation's public education enrollment, they are served less than 1 percent of all free or partially subsidized meals.* However, students at one half of the schools do not have the option to apply for the program. Possibly further reducing DoD dependents' proportionate participation in the program is the fact that only lunches are made available to them. Stateside participation may also include breakfast.

ADVISORY BODIES

The legislation establishing the Department of Defense Dependents Schools specifies that (1) School Advisory Committees are to be established for each school in the system; (2) Installation Advisory Committees are to be established at military installations having more than one school; (3) and a worldwide Advisory Council on Dependents Education is to be established. School Advisory Committees are to advise principals regarding the operation of the school, make recommendations concerning curriculum and budget matters, and advise the military commander regarding problems of dependents' education within the jurisdiction.

At each of the representative sites visited, the principal and one (randomly selected) member of the School Advisory Committee [SAC] were asked about the activities of the committee. Principals spoke of the SACs in terms that were nearly equally distributed among positive (46 percent) and neutral (51 percent). Only one principal cast this discussion in negative terms. From the perspective of principals, this relatively new advisory structure is one that should be retained (77 percent). It provides a vehicle for communication between school and community and allows for a balance of viewpoints to be heard. Exhibit 10-8 identifies the reasons given by principals for their expressions of interest in continuing the SAC functions. Although satisfied with the role of SACs (mean score of 4.0 on a 5-point scale) and recommending that SACs be maintained, school principals were mixed in their perception of the SAC's value specifically to school operations (mean score of 3.0 on a 5-point scale). Three out of 10 report that SACs are valuable; 3 out of 10 report they are neither valuable nor not valuable; and 4 out of 10 report they are not valuable.

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*Source: Internally prepared statistics for October 1982, Food and Nutrition Service, U.S. Department of Agriculture.

SACs were established to advise principals on matters relative to schools. The issues on which they provide advice are most frequently those of logistics (46 percent), with the remaining issues equally divided across topics pertaining to the quality of education (27 percent) and other types of issues. Exhibit 10-9 presents details on the types of issues addressed by SACs that the members believe to be important.

At the time of data collection, 21 percent of these issues were still under discussion or being considered by those to whom the recommendation had been referred. Another 42 percent had resulted in the change sought by the committee. For the remaining issues, either the SAC had reached no recommendation (14 percent); no change or reply had resulted from the recommendation

REASONS FOR RETAINING SAC FUNCTION	PERCENT OF PRINCIPALS
Provides Vehicle for Communication between School and Community	40%
Is a Forum for a Balance of Viewpoints	33%
Provides for School Representation	27%
Member Teachers Have a Knowledge of the School	27%
Staff Input Is Beneficial	20%
A Means to Communicate with Teachers	10%
Other	10%

EXHIBIT 10-8

REASONS CITED BY PRINCIPALS FOR RETAINING SACs

EDUCATIONAL ISSUES	PERCENT OF SAC MEMBERS REPORTING ISSUE*
Educational Quality	22%
Teacher Qualifications/Staff	22%
Curriculum	11%
Grade Span	5%
School Hours	3%
LOGISTICS ISSUES	
School Lunch	24%
Transportation	24%
Supplies/Materials	14%
Safety	19%
Building Maintenance	14%
Physical Plant/Construction	11%
OTHER ISSUES	
School Policies	19%
Funds/Budget	16%
Extracurricular	11%
Special Needs	8%
Communication	5%

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*More than one response permitted.

EXHIBIT 10-9

MAJOR ISSUES ADDRESSED BY SACs

(19 percent); or the SAC's recommendation had been rejected (4 percent). As shown in Exhibit 10-10, members were most positive in their assessment of the committee's impact on military/community relations (56 percent) and the school's extracurricular program (41 percent). They tended to assess their impact on school schedules as having been negative twice as often as positive.

Of the SAC members interviewed, 73 percent had served stateside on Parent Teacher Associations or other school advisory bodies. These individuals compared their SAC's organization and operations favorably with their stateside experience (Exhibit 10-11). Of the SAC members included in the sample, 70 percent were entering at least their second year of membership.

Three-quarters (76 percent) of the SAC members in the sample were civilians, while 19 percent were officers, and 5 percent were enlisted personnel. All ranks of the military were reported to be represented on half (53 percent) of the SACs. Among the remaining committees the absence of military personnel was distributed as follows:

No military personnel	15%
No officers	8%
No enlisted (E1-E3)	15%
No enlisted (E4-E9)	15%
No enlisted (unspecified)	46%

Members of School Advisory Committees are elected by the parents of students enrolled in the school. No data are available regarding whether enlisted personnel have not run for membership

IMPACT OF SAC	POSITIVE IMPACT	NEUTRAL OR N.A.	NEGATIVE IMPACT
Military/Community Relations	56%	34%	9%
School Operations	20%	50%	20%
Academic Programs	31%	53%	16%
Extracurricular	41%	47%	13%
School Schedules	19%	53%	28%
Transportation	28%	59%	13%
Discipline	22%	66%	13%

EXHIBIT 10-10

SAC MEMBERS' PERCEPTIONS OF THEIR COMMITTEES' IMPACT

COMPARED TO STATESIDE	YES	NO
Is it as easy for the SAC to get members?	69%	31%
Is it as easy to attend meetings?	80%	20%
Is it as easy to participate in SAC meetings?	96%	4%
Is the SAC as involved in school policy formulation?	67%	33%
Is the SAC as often in agreement with school administrators?	80%	20%

EXHIBIT 10-11

MEMBERS' COMPARISONS OF SAC WITH
SIMILAR STATESIDE ADVISORY EXPERIENCE

or have simply not been elected at the 25 percent of schools where these ranks are not represented on the SAC.

Installation Advisory Committees [IAC] have been established for 7 out of 10 schools in the sample. Principals reported that these committees take an active interest in the schools (at 78 percent of schools having a cognizant IAC). The IACs are viewed by principals as being of value but of slightly less value to the school's operations than the SAC (mean score of 2.7 versus SAC score of 3.0). These committees appear to be serving their intended purpose by addressing issues at the community level and providing interface with the military community (Exhibit 10-12).

The Advisory Council on Dependents Education is advisory to the Director of DoDDS. The council directs its attention to general policies for curriculum selection, administration, and operation. The Advisory Council also provides a vehicle for communication between DoDDS and other Federal agencies concerned with elementary and secondary education. Given the distance of this council from the local DoDDS school principal, both organizationaly and geographically, a surprising 35 percent of these principals see the Advisory Council as serving a useful function. Another 38 percent believed themselves to be too uninformed of the council's activities to comment. The remaining principals (27 percent) do not recognize the council's functions as useful. Among the reasons given by principals for reporting the council to be useful were the worldwide unifying role it plays (46 percent of principals), its function as a forum for information

ROLE	PERCENT*
Addresses Issues at the Community Level	28%
Deals with Issues under Military Jurisdiction	21%
Advises the Commander	18%
Other Advisory Role	14%
Inactive	11%
Other	7%

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*More than one response allowed.

EXHIBIT 10-12

ROLES OF INSTALLATION ADVISORY COMMITTEE
VIS-A-VIS SCHOOL

sharing (31 percent), its appeals function (23 percent), and the support it provides for specific programs (23 percent).

SUMMARY AND RECOMMENDATIONS

The data suggest that the support mechanisms available to the schools (e.g., the community commander, Schools Officer, and advisory committees) are serving their functions well, although full advantage may not be being taken of them. Given these generally positive findings, no recommendations for change are offered in these specific areas, other than the suggestion that these avenues of assistance be utilized more fully.

DoD eligibility for the USDA free and partially subsidized meal program is recent, and the U.S. Department of Agriculture has considered modifying the legislation to exclude DoD children. The limited data available through the Comprehensive Study suggest that the nutritional needs (demonstrated on the basis of eligibility) may approach that found stateside. The philosophy in the legislation allowing stateside schools to participate in this program reflects an intent to assure that all children receive sufficient nourishment to safeguard their health and well-being and to form good eating habits. Blanket exclusion of DoD dependents from a program with such goals should not be undertaken, lacking fuller documentation.

CHAPTER 11

STATESIDE RESOURCES COMPARISON

INTRODUCTION

In this chapter we compare DoDDS' expenditure of resources with that of stateside public school systems. While there are many points of one-to-one equivalency between the DoDDS system and stateside public schools, such an analysis is not a straightforward task because of significant differences--in structure, operational requirements, and services provided.

In the first instance, structure, DoDDS is a worldwide system with its Headquarters Office of Dependents Schools [ODS] located in Alexandria, Virginia. At the time of this study the system was divided into six regions with individual schools under the authority of their respective Regional Offices. Stateside, school authorities include State Education Agencies [SEAs] and Local Education Agencies [LEAs]. Many (but not all) LEAs have subdistrict administrative areas roughly equivalent to the DoDDS Regional Offices. The functions of these structures are also not directly comparable. Within DoDDS, policy formulation and oversight functions comparable to those carried out by SEAs are the responsibility of ODS, which also performs functions (such as budget development) that are comparable to LEA functions stateside. SEAs, intermediate units, and LEAs also have access to eight federally funded privately operated regional educational laboratories that provide research and development and technical assistance support.

System comparability is most apparent in the area of operational requirements. Both DoDDS and LEAs exist for the express purpose of educating students by operating schools. There are, however, operational differences. The DoDDS system purchases many of its operational services from the military (e.g., accounting, maintenance, student transportation) rather than performing the functions directly. Funding of construction for dependents schools is handled through Federal appropriations, and the system does not incur debt and interest expenses for capital outlay comparable to LEAs. In the opposite vein, DoDDS incurs costs not experienced by public schools, such as long-distance transportation expenses for students attending its boarding schools, permanent change of station expenses, and the cost of teachers' periodic returns to the continental United States.

In a similar fashion, services delivered by public schools differ somewhat from those provided by DoDDS. The DoDDS system is a kindergarten through grade 12 system, whereas stateside districts may begin with pre-kindergarten and may offer adult education, summer school, and community service programs not found in DoDDS. Stateside systems operate student feeding programs. DoDDS does not.

In the area of resource costs, order of magnitude differences may also be anticipated. DoDDS is geographically dispersed. Not only is the system worldwide, but it must provide an education to all overseas DoD dependent students, regardless of their isolation. The result is a combination of long bus rides for many students and the operation of numerous small schools (some with fewer than 30 students).

Given these and other differences that will be noted later, a highly sophisticated statistical comparison seeking financial accounting and audit levels of accuracy would be inappropriate and misleading. The research design for the comparison, and the analyses presented in this chapter thus:

- Consider differences in ordinal ranges only
- Exclude costs unique to DoDDS vis-a-vis stateside systems
- Exclude costs unique to stateside systems vis-a-vis DoDDS

METHODOLOGY

Sample Design and Response

Five independent samples of stateside systems were selected for comparison with DoDDS. The criteria for selection were structural and operational, each defined to test a different hypothesis.

DoDDS is a large system compared with the universe of stateside Local Education Agencies. Size (measured in terms of numbers of students and schools) may influence costs in terms of economies of scale. The 16 Local Education Agencies having enrollment and number of schools within 50 percent of DoDDS enrollment and number of schools were included in this sample. Of these 16, 13 (81 percent) responded to the request for information. Seven provided complete data for the study.

As noted earlier DoDDS is also a system of small schools; 35 percent of DoDDS schools have enrollments of less than 300. The second sample included stateside Local Education Agencies operating within 50 percent the number of small schools as DoDDS. The six school districts having a proportion of small schools most like DoDDS's were selected. Five of these districts (83 percent) responded to our request. Three of the five responses provided all data needed.

The third sample was selected to test the hypothesis that DoDDS costs are similar to those of stateside school systems serving a large number of military families. Parental expectations of school system operations were assumed to influence the resources that would be dedicated to education. The stateside school systems having the highest proportion of military impacted enrollment were selected for inclusion (regardless of size). Five in this sample responded, of which four provided all necessary data.

The fourth sample was intended to allow comparison of DoDDS regions with stateside school systems exclusive of ODS resources and costs. Eighteen systems, three comparable in size to each of DoDDS' six regions, were sampled. These were small school districts ranging in size from 8,000 to 48,000 students. Only one Local Education Agency responded within each of the regionally based strata. Additionally, structural and conceptual problems were encountered in segregating and allocating DoDDS regional costs. This sample was not analyzed.

The fifth sample pursued a similar concept as the DoDDS regional sample, having as its purpose comparison of DoDDS in total with statewide systems, inclusive of State Education Agency resources. Seven states met the criteria that the statewide system have enrollment and number of schools within 50 percent of DoDDS enrollment and number of schools. Data were received from six State Education Agencies, providing an 86 percent response rate.

Stateside Data Collection and Compilation

Data were collected entirely from public documents such as annual reports, budget compilations, and staffing reports. As such, much of the financial data have been the subject of audit, taken as an indication that they are of a high level of accuracy. None of the data appear to be anomolous or markedly different across school systems, particularly when size is taken into account. Key comparison data contained in the documents were abstracted and transcribed to summary forms. The summary forms included definitions for each data element of interest. The definitions responded to the need to exclude from stateside counts those costs and resources not comparable to DoDDS. In many instances the data contained in this report will not be found as a single line item in a budget document. Published figures have been adjusted using information contained elsewhere in the same or a companion document to correspond with DoDDS, or data elements have been computed based on detail provided by respondents. The requirement that only data representing comparable use of resources be referenced in this study contributed to our inability to include information from all responding stateside systems.

Typical computations performed include:

- Tabulation of total Local Education Agency staff totals from individual unit or program budget or statistical reports
- Subtraction of amounts budgeted for adult or vocational education or summer school from total budgets
- Isolation and subtraction of the cost of school meal programs from budget totals
- Verification that double counts of enrollment across elementary, middle school/junior high, and high school grades had not occurred

The data so derived have been summarized in comparison tables presented in this chapter. For each sample, individual items of cost and totals are compared to DoDDS and differences are analyzed. Items of cost anticipated to differ due to order of magnitude or structural differences are analyzed independently to assess their influence on the broader cost comparisons.

Clearly, data collection solely from published documents constitutes a limitation on the study. Preferably, data would have been collected on site, with access to respondent financial records and the ability to determine the exact degree of comparability of the various objects of expenditure between LEAs. Such a "quasi-audit" type approach clearly would yield somewhat more accurate data, though at substantially higher cost. Also, there is a concern regarding the utility and appropriateness of questioning data which have been subjected to outside audit, public scrutiny, and budgetary decision making. It was concluded that since the data available are official data, they are sufficiently adequate and accurate for the purposes of this study. Specific sources of the data presented are noted in the bibliography appended at the end of this chapter.

KEY CONSIDERATIONS RELATED TO COST COMPARISONS

Interpretation of cost data should be premised on the following considerations regarding the specific data elements used:

> **Salary**. Figures used are total salary of all Local Education Agency personnel, teaching and nonteaching. Clearly, differences can arise from disparities in salary scales. Since DoDDS teachers' salaries are indexed to salaries of teachers in stateside systems serving cities with populations of 100,000 or more we would expect DoDDS average salaries to equate to those of the larger LEAs and be somewhat higher than the averages of smaller units.
>
> **Fringe Benefits**. What is shown are the financial costs actually reflected in the accounts of the comparison organizations. This will lead to substantial variation for several reasons. First, not all DoDDS fringe benefits costs are reflected in DoDDS accounts. This is particularly true of Civil Service retirement costs, actual payments which are reflected in Office of Personnel Management accounts. Also, liabilities for such expenses are not reflected when incurred (only when paid), whereas LEAs usually do accrue such items as they are incurred. This is also true of the accrual of annual and sick leave. The Office of Management and Budget has stated that accrued (as opposed to expensed) fringe benefit costs of Federal employees approximate 27 to 30 percent. Actual DoDDS reported fringe benefit costs for FY82 are 8.7 percent of salaries; the difference is due to the factors noted above. Finally, a wide variance in fringe benefits may exist due to specific kinds of benefits provided. This includes such factors as:
>
> - Type of retirement plan used--FICA or private vs. Civil Service

- Taxes for unemployment compensation, Workmans' Compensation, et al., and significant variance in rates from state to state

- Wide variations in "optional" benefits such as health and life insurance, disability insurance, tuition assistance, leave and holiday allowances, and so forth

Non-Personnel Costs. These items are impacted significantly by account definition differences from school district to school district; e.g., what would be attributed to "Supplies and Materials" in one stateside system might be accrued under "Contractual Services" in another. This problem is mitigated to a degree by general use of the Department of Education's Local Education Agency Accounting Handbook by many districts, but latitude for variation still remains.

Number of Students. We have used number of individuals enrolled, rather than average daily attendance, primarily because projected enrollments are the usual basis for obtaining budgeted funds for the stateside systems studied. Additionally, ODS does not maintain data on average daily attendance. In a number of instances, it was necessary to accumulate these data from a variety of separate tabulations made by the school systems. Also, it was often unclear whether special education students were included or excluded in base enrollment totals. Every effort was made to identify and exclude double counting where it was suspected to have occurred.

Number of Staff. This is intended to be actual full-time-equivalents [FTEs] of employment. A key problem is the reporting period. We have used school year 1981-82 for comparison, but this is not precisely equivalent to Federal FY82, the period from which DoDDS data are drawn. Various employment strengths are shown in budget and personnel documents for DoDDS during FY 82; however, the number stated by DoDDS to be the most accurate is 10,490 FTEs for FY82.

Average Cost Items. It should be stressed that the averages derived are intended to show ordinal relationships only, not precise costs. The important thing is the relative range of costs and DoDDS positioning within that range. If DoDDS costs are generally within the range of comparison to stateside system costs, then they may be construed as equivalent, and presumably reasonable.

DoDDS COMPARED TO LEAs

This section deals with a comparison of DoDDS' operating costs to equivalent costs for each of the three LEA samples. Specifically, adjusted DoDDS operating costs are developed, and data are compared to those for:

- LEAs similar in size to DoDDS
- LEAs of similar size to DoDDS with a high proportion of small schools
- LEAs with a high proportion of military dependent enrollees, regardless of LEA size

Each of these comparisons is detailed in the following paragraphs:

Exhibit 11-1 summarizes those DoDDS operating costs directly comparable to LEA costs. The totals presented were arrived at in the following manner:

- Costs for items unique to DoDDS were eliminated. These are presented separately in the DoDDS budget submissions.
- Tuitions paid for attendance outside DoDDS-operated schools were eliminated.
- Summer school expenses were eliminated.
- The balance of the expenses for Administration, Education, and Logistics were recast in the format used by LEAs; note that totals are identical with DoDDS totals, and only the format has been changed.

After these totals were developed, average costs per year were determined on a per student and per staff member basis. The results are presented in Exhibit 11-2.

	ADMIN	EDUCATION*	LOGISTICS	TOTAL
Salary	$13,930	$186,731	$ 6,187	$206,848
Benefits	1,307	16,543	149	17,999
Subtotal	15,237	203,274	6,336	224,847
Contractual Services**	-	2,767	53,724	56,491
Supplies and Materials	5,002	7,100	1,503	13,605
Furniture and Equipment.	-	1,222	638	1,860
Other	2,276	4,609	52,473	59,358
Total	$22,515	$218,972	$114,674	$356,161

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*Excludes summer school.

**Includes cost of Interservice Support Agreements.

EXHIBIT 11-1

GROSS COSTS OF DoDDS FOR FY82
(EXCLUDING DoDDS' UNIQUE COSTS)
($000)

COST ITEM	TOTAL COSTS ($000)	AVERAGE COST	
		PER STUDENT	PER STAFF
Salary	$206,848	$1,557	$19,718
Fringe Benefits	17,999	135	1,716
Subtotal	224,847	1,692	21,434
Contractual Services	56,491	425	5,385
Supplies and Materials	13,605	102	1,297
Furniture and Equipment	1,860	14	177
Other	59,358	447	5,658
Total	$356,161	$2,680	$33,951

Number of Students K-12: 132,888

Number of Staff: 10,490

EXHIBIT 11-2

DoDDS COSTS AND AVERAGES FOR FY82

Comparison of DoDDS to LEAs of Similar Size

The average total budget of the 7 LEAs was $311,505,000 in FY82. Average enrollment of the LEAs presented in the analysis (Exhibit 11-3) was 118,893. DoDDS's total operating budget for the fiscal year ending in 1982 was $356,161,000--14 percent higher than the computed stateside average. DoDDS's enrollment was 132,888 students--12 percent higher than the average of school districts in the sample. The average number of staff in the stateside sample was 10,003 compared with 10,490 employees for DoDDS, a difference of 5 percent. Per student costs ($2,680) were 2 percent higher for DoDDS than the stateside systems ($2,620); and per staff costs were 9 percent higher for DoDDS ($33,951 versus $31,141).

Salaries, inclusive of fringe benefits, represent 63 percent of the total budget shown for DoDDS and 84 percent of that in the stateside average budget. As noted previously, the computation and financing of fringe benefits is different in DoDDS from that in the sampled stateside systems. Five school districts provided detail on fringe benefits. The following results are obtained when salaries, exclusive of fringe benefits, are considered for these five systems and DoDDS:

	DoDDS	AVERAGE 5 LEAs	PERCENT DIFFERENCE
Pupils	132,888	104,611	+ 27%
Salaries ($000)	$ 206,848	$ 211,700	- 2%
Salaries per staff	$ 19,719	$ 22,304	- 12%
Salaries per pupil	$ 1,556	$ 2,024	- 23%

COST ITEM OR TYPE	LEA											DoDDS		
	HOUSTON TX	FAIRFAX CO, VA	MONTGOMERY CO, MD	MILWAUKEE WISC	MEMPHIS TENN	SAN DIEGO CALIF	DIST. OF COLUMBIA	TOTAL ITEM COST	AVERAGES			TOTAL COSTS	AVERAGES	
									7 LEAs	STUD'T	STAFF		STUDENT	STAFF
SALARY	(a)	$269,584	(a)	$194,778	$131,018	$218,782	$244,337	*	*	*	*	$206,848	*	*
FRINGE BENEFITS	(a)	48,881	(a)	61,299	10,361	33,654	11,919	*	*	*	*	17,999	*	*
SUBTOTAL	$334,169	$318,465	$265,867	$256,077	$141,379	$252,436	$256,256	$1,825,649	$260,807	$2,194	$26,073	$224,847	$1,692	$21,434
CONTRACTUAL SERVICES	36,469	(INCLUDED UNDER "OTHER")	3,712	33,447	19,374	1,456	1,841	96,299	b 16,050	b 136	b 1,679	56,491	425	5,385
SUPPLIES & MATERIALS	19,222	12,238	19,414	13,864	7,177	13,053	11,512	96,483	13,783	116	1,378	13,605	102	1,297
FURNITURE & EQUIPMENT	18,462	8,961	3,563	4,148	717	6,845	3,209	45,905	6,558	55	656	1,860	14	177
OTHER	5,770	33,912	51,115	4,389	498	20,518	0	116,202	16,600	140	1,660	59,358	447	5,658
TOTAL COSTS	$424,092	$373,576	$334,671	$311,938	$169,145	$294,308	$272,818	$2,180,538	$311,505	$2,620	$31,141	$356,161	$2,680	$33,951
NUMBER OF STUDENTS	213,607	123,675	95,587	86,507	110,983	108,347	93,545	832,251	118,893			132,888		
NUMBER OF STAFF	11,603	12,654	10,960	8,359	8,008	10,522	7,915	70,021	10,003			10,490		
AVERAGE COST/ STUDENT	$ 1,985	$ 3,201	$ 3,501	$ 3,606	$ 1,524	$ 2,716	$ 2,916	$ 2,620	$ 2,620			$ 2,680		
AVERAGE COST/ STAFF	$ 36,550	$ 29,522	$ 30,536	$ 37,318	$ 21,122	$ 27,971	$ 34,468	$ 31,141	$ 31,141			$ 33,951		

(a)Detail not available.
(b)Excludes Fairfax County.

EXHIBIT 11-3

TABULATION OF COMPARATIVE
FY82 COSTS OF LARGE LEAS
($000)

The DoDDS salary figure just given is understated in that it does not include salaries of personnel providing functions for DoDDS through Interservice Support Agreements with the military. These costs appear under contractual services and indirect payments included under other costs. Three stateside systems comparable in size to DoDDs were able to provide detailed data on both fringe benefits and contractual services. The comparison of combined salaries (exclusive of fringe benefits) and contractual services between these three school districts and DoDDs indicates strong similarities when examined on a per pupil basis:

	DoDDS	AVERAGE 3 LEAs	PERCENT DIFFERENCE
Pupils	132,888	99,846	+ 33%
Salaries and Contractual Services ($000)	$ 292,123*	$211,258	+ 38%
Per Pupil	$ 2,198	$ 2,116	+ 4%

Comparisons on a per staff basis also reveal similarities between DoDDS and stateside systems. These comparisons must be considered with caution since personnel providing accounting, maintenance, and transportation functions are not on the DoDDS payroll. The following analysis is based on total staff.

	DoDDS	AVERAGE 7 LEAs	PERCENT DIFFERENCE
Total Staff	10,490	10,003	+ 1%
Total Pupils	132,888	118,893	+ 12%
Pupils Per Staff	12.7	11.9	+ 7%

The above figures indicate that DoDDS is slightly less heavily staffed than the stateside school districts of comparable size. Three of these stateside systems provided detailed data on central office staff by function. These systems had an average of 103 professionals and 588 nonprofessionals in personnel, finance and accounting, automatic data processing, transportation, and maintenance positions. This represented 7 percent of the total staff in these systems. DoDDS had 232 filled positions in these areas, or 2 percent of its total staff. Assuming DoDDS conducted such functions in-house at the same staffing level as the 3 reporting LEAs (i.e., 7 percent of staff), its pupil-to-staff ratio would be 12.0, a ratio almost the same as that reported by sampled stateside school districts (11.9).

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* Includes $10,632 in indirect payment costs.

Comparison of DoDDS to Stateside Local Education Agencies with a High Proportion of Small Schools

DoDDS is a system of many small schools; 35 percent of its schools have enrollments of 300 students or less. It was hypothesized that this structure would affect the cost of providing services. Specifically, staff/pupil ratios and per pupil costs might be higher in DoDDs because of the need to provide a full complement of school-based resources to smaller numbers of students. Of the LEAs selected for comparison to DoDDS to examine this hypothesis, three provided all data needed for the analysis. These were:

- Montgomery County, Maryland (23 percent small schools)
- Columbus, Ohio (18 percent small schools)
- Seattle, Washington (56 percent small schools)

Detailed cost comparisons are presented in Exhibit 11-4.

COST ITEM OR TYPE	LEAs							DoDDS		
	MONTGOMERY CO MD	COLUMBUS OH	SEATTLE WA	TOTAL ITEM COST	AVERAGES			TOTAL COSTS	AVERAGE	
					3 LEAs	STUDENT	STAFF		STUDENT	STAFF
SALARY	(a)	$121,410	$113,856	*	*	*	*	$206,848	*	*
FRINGE BENEFITS	(a)	23,125	17,156	*	*	*	*	17,999	*	*
SUBTOTAL	$256,867	$144,535	$131,012	$532,414	$177,471	$2,525	$23,688	$224,847	$1,692	$21,434
CONTRACTUAL SERVICES	3,712	14,640	22,337	40,689	13,563	193	1,810	56,491	425	5,385
SUPPLIES & MATERIALS	19,414	6,811	8,789	35,014	11,671	165	1,558	13,605	102	1,297
FURNITURE & EQUIPMENT	3,563	504	495	4,562	1,521	22	204	1,860	14	177
OTHER	51,115	1,150	382	52,647	17,549	250	2,342	59,358	447	5,658
TOTAL COSTS	$334,671	$167,640	$163,015	$665,326	$221,775	$3,155	$29,602	$356,161	$2,680	$33,951
NUMBER OF STUDENTS	95,587	71,118	44,145	210,850	70,283			132,888		
NUMBER OF STAFF	10,960	7,149	4,367	22,476	7,492			10,490		
AVERAGE COST/STUDENT	$ 3,501	$ 2,357	$ 3,693	$ 3,155	$ 3,155			$ 2,680		
AVERAGE COST/STAFF	$ 30,536	$ 23,449	$ 37,329	$ 29,602	$ 29,602			$ 33,951		

(a) Detail not available

EXHIBIT 11-4

TABULATION OF COMPARATIVE FY82 COSTS OF LARGE
LEAS HAVING HIGH PROPORTIONS OF SMALL SCHOOLS
($000)

The mean costs of stateside school systems in this sample were $221,775,000 in FY82. DoDDS costs at $356,161,000 were 61 percent higher; however, 89 percent more students were enrolled in DoDDS than the average of the stateside districts having many small schools.

The following comparison indicates that DoDDS is operating a system with a high proportion of small schools with 35 percent less staff on a per pupil basis and at a 15 percent lower cost per pupil than stateside systems with similar proportions of small schools:

	DoDDS	AVERAGE 3 LEAs	PERCENT DIFFERENCE
Pupils/Staff	12.7	9.4	+ 35%
Salaries and Fringe Benefits/Staff	$ 21,434	$ 23,688	- 10%
Salaries, Fringe Benefits, and Contractual Services/ Pupil	$ 2,198	$ 2,718	- 19%
Total Costs/Pupil	$ 1,680	$ 3,155	- 15%

Comparison of DoDDS to LEAs with a High Proportion of Military Dependent Enrollments

The LEAs in this group were chosen based on (1) proximity to major military facilities, and (2) more than 25 percent of the students enrolled being military dependents. Consequently, it was not expected that these LEAs would compare directly in terms of student population totals or gross annual operating costs.

Exhibit 11-5 tabulates cost elements for the sample LEAs. Of the 4 districts providing data, mean annual operating costs in FY82 approximated $28,002,000, while mean enrollment was 10,897.

COST ITEM OR TYPE	LEA								DODDS		
	GROTON CONN	YORK PA	CLOVER PARK, WA	KILEEN TX	TOTAL ITEM COST	AVERAGES			TOTAL COSTS	AVERAGE	
						4 LEAs	STUDENT	STAFF		STUDENT	STAFF
SALARY	$11,602	$12,273	$32,580	*	*	*	*	*	$206,848	*	*
							*				
FRINGE BENEFITS	1,109	2,124	4,661	*	*	*	*	*	17,999	*	*
SUBTOTAL	$12,711	$14,397	$37,241	$22,828	$ 87,177	$21,794	$2,000	$24,612	$224,847	$1,692	$21,434
CONTRACTUAL SERVICES	2,556	317	4,328	1,798	8,999	2,250	206	2,541	56,491	425	5,385
SUPPLIES & MATERIALS	1,503	547	4,422	2,012	4,484	2,121	195	2,395	13,605	102	1,297
FURNITURE & EQUIPMENT	172	105	2,104	898	3,274	819	75	925	1,860	14	177
OTHER	0	2,861	247	960	4,068	1,017	94	1,150	59,358	447	5,658
TOTAL COSTS	$16,942	$18,227	$48,342	$28,496	$ 112,007	$ 28,002	$2,570	$31,623	$356,161	$2,680	$33,951
NUMBER OF STUDENTS	6,242	8,722	12,041	16,449	43,586	10,897			132,888		
NUMBER OF STAFF	607	612	1,372	951	3,542	886			10,490		
AVERAGE COST/ STUDENT	$ 2,714	$ 2,090	$ 4,129	$ 1,733	$ 2,570	$ 2,570			$ 2,680		
AVERAGE COST/ STAFF	$ 17,911	$ 29,783	$ 35,235	$29,964	$ 31,623	$ 31,623			$ 33,951		

EXHIBIT II-5

TABULATION OF COMPARATIVE FY82 COSTS OF LEAS
WITH HIGH MILITARY DEPENDENT ENROLLMENTS
($000)

Clearly, these LEAs constitute a very different size class compared to DoDDS, so gross cost comparisons are relatively unproductive. Given the existence of impact aid and the high percentage of dependent enrollments, one would expect comparable per student costs and per staff costs.

Upon examination, we find that these LEAs had an average per pupil expenditure of $2,570 in FY82, compared to the DoDDS figure of $2,680--a difference of 4 percent. Similarly, average cost per staff member of the LEAs is $31,623, compared to $33,951 for DoDDS--a difference of 7 percent. Both per pupil and per staff costs are quite comparable to DoDDS.

DoDDS COMPARED TO SEAs

Of the eight states with enrollments comparable to DoDDS, these six responded to requests for data. These were:

- Delaware
- District of Columbia
- Nevada
- Rhode Island
- Wyoming
- Vermont

Wyoming and Vermont provided financial data only on the state agency itself.

The comparison of DoDDS to states is premised on structural similarity. ODS, Washington Headquarters, for example, has some of the characteristics of an SEA, while the regions can be construed as analogous to LEAs. The states included in the sample do not include an intermediate structure between state and local education agency. The District of Columbia does have a regional structure which is accounted for in the data presented. Statewide costs of the responding SEAs which provided data are compared to DoDDS. A direct comparison between ODS central office and SEA costs is not possible since DoDDS includes in ODS figures the cost of Interservice Support Agreements negotiated on a worldwide basis. A detailed comparison of ODS with statewide systems having comparable enrollment is provided in Exhibit 11-6. The following summarizes this comparison:

	DoDDS	AVERAGE 4 STATES	PERCENT DIFFERENCE
Total Pupils	132,888	122,779	+ 8%
Total Staff	10,490	8,861*	+18%
Total Costs	$356,161	$316,031	+13%
Cost Per Pupil	$ 2,680	$ 2,574	+ 4%
Cost Per Staff	$ 33,951	$ 32,165*	+ 6%
Pupils Per Staff	12.7	13.9	- 9%

DoDDS's total enrollment is 8 percent higher than the average enrollment of the stateside systems examined. DoDDS total costs are 13 percent higher than the observed statewide costs. Per pupil costs are thus very similar between DoDDS and statewide systems. The largest difference found between DoDDS and states is in the area of staff, where DoDDS reports 18 percent more employees than do the statewide systems. Whereas DoDDS appears less heavily staffed than school districts of similar size (showing 7 percent more pupils per staff member), DoDDS appears more heavily staffed when it is compared with the entire

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*Three-State Average.

COST ITEM OR TYPE	STATE								DoDDS		
	DIST. OF COLUMBIA	NEVADA	RHODE ISLAND	DELAWARE	TOTAL ITEM COST	AVERAGE 4 STATES	AVERAGE STUDENT	AVERAGE STAFF (a)	TOTAL COSTS	AVERAGE STUDENT	AVERAGE STAFF
SALARY	$244,337	$230,356	$280,770	$175,569	$ 931,032	$232,758	$ [illegible]896	$ 24,462	$206,848	$1,557	$19,718
FRINGE BENEFITS	11,919	43,670	52,849	18,335	126,773	31,693	258	2,781	17,999	135	$ 1,716
SUBTOTAL	$256,256	$274,026	$333,619	$193,904	$1,057,805	$ 26,445	$ 2,154	$ 27,242	$224,847	$1,692	$21,434
CONTRACTUAL SERVICES	1,841	52,398	48,459	21,500	124,198	31,050	253	2,849	56,491	425	5,385
SUPPLIES & MATERIALS	11,512	(INCLUDED UNDER CONTRACT. SERVICES)	22,507	7,766	41,785	13,928	85	725	13,605	102	2,297
FURNITURE & EQUIPMENT	3,209		4,490	2,154	9,853	3,284	20	202	1,860	14	177
OTHER	-0-		-0-	30,482	30,482	10,161	62	1,147	59,358	447	5,658
TOTAL STATEWIDE COSTS	$272,818	$326,424	$409,075	$255,806	$1,264,123	$316,031	$ 2,574	$ 32,165	$356,161	$2,680	$33,951
NUMBER OF STUDENTS (TOTAL STATE)	93,545	151,339	151,161	95,072	491,117	122,779			132,888		
NUMBER OF STAFF (STATEWIDE)	7,915	8,637	N.A.	10,[illegible]1	(a) 26,583	(a) 8,861			10,490		
AVERAGE COST/STUDENT	$ 2,916	$ 2,157	$ 2,706	$ 2,691	$ 2,574	$ 2,574			$ 2,680		
AVERAGE COST/STAFF	$ 34,468	$ 37,794	$ *	$ 25,502	(a) $ 32,165	(a) $ 32,165			$ 33,951		

(a)Excludes Rhode Island

EXHIBIT II-6

TABULATION OF COMPARATIVE STATEWIDE OPERATING COSTS FY82

($000)

educational system of sample states (9 percent fewer pupils per staff member). This differential would be somewhat higher if the personnel providing the support services DoDDS receives through the military were to be included. As noted previously, DoDDS is a geographically dispersed system. The time budgeted for administrators and educational coordinators to spend in transit may be higher than that required stateside. However, this does not appear to account for the difference. Assuming that one third of all above-school level FTEs are spent in transit (175 FTES), DoDDS would have the real time equivalent of 12.9 staff per pupil (7 percent more than stateside).

CONCLUSIONS AND RECOMMENDATIONS

In the preceding sections, budgeted costs of DoDDS in FY82 were compared to those experienced by a variety of public school districts in the same period. Comparisons were based on equivalence of district size, proportion of small schools, and percentage of military dependents enrolled. Also, elements of cost and overhead rates were compared. From these analyses, the following conclusions have been drawn.

If reasonableness of costs is defined as similarity to those costs experienced by like organizations, then DoDDS costs are fairly reasonable. When costs unique to DoDDS are eliminated gross costs per year, based either on student or staff averages, are quite close. The variation is least noticed when DoDDS is compared to smaller districts in such special comparisons as the percentage of military dependents analysis. Here, DoDDS' average costs are not widely disparate. Although per staff costs exhibit some variance, per pupil costs are quite close. The largest difference found was in the comparison of DoDDS to LEAs with many small schools; the DoDDS per-pupil cost is 15 percent below the LEAs' costs. The most marked difference found was in the comparison of DoDDS with total state systems. Even here per-pupil costs were similar; the difference was in staff.

Conclusions presented here regarding the reasonableness of DoDDS costs must be tempered by the fact that only cost experience has been compared. There has been no cost-effectiveness or cost-efficiency analysis. Cost comparisons presented here must be interpreted in the light of analyses of organizational structure, staffing, program effectiveness, and general efficiency presented elsewhere in this report.

Given that DoDDS costs are presumably reasonable in terms of amounts per service, compared with public school districts, there are no general recommendations relative to cost increase, reduction, or similar actions. What is recommended is further detailed examination of staffing patterns. It was expected that DoDDS would demonstrate heavier staffing than stateside LEAs of comparable size; this was not found to be the case. DoDDS in fact is not staffed in a manner comparable to stateside districts with numerous small schools, having fewer staff per pupil. Additionally, when the full stateside educational structure is taken into consideration, DoDDS is more heavily staffed. These findings in combination suggest that somewhat lower staffing may be evident at lower organizational levels, while higher staffing may be occurring in offices more removed from the schools.

After review of DoDDS' financial and budget formats, and the data derivable therefrom, some broad recommendations regarding managerial accounting and document formats have been developed, and are presented in Chapter 12, Budget and Finance.

RESPONDENT	DATA SOURCE
Clover Park, Washington	*Budget Report, Fiscal Year 1982-83* (Clover Park School Dist. #400, Aug. 9, 1982)
District of Columbia	Submitted completed data form
Columbus, Ohio	Progress in Education; A Report To the Community (School Board, Oct. 1981) *Columbus Public Schools General Fund Budget FY82* (School Board, March 30, 1982)
State of Delaware	*Report of Educational Statistics, 1981-1982* (State Board of Education, Oct. 1982)
Fairfax County, Va.	*Fairfax County Approved Budget FY83*, Vol. I, II, & III; *Annual School Report*, 1982
Groton, Connecticut	*Budget, Fiscal 1983* (Board of Education, March, 1982) *Pupil Data Report*, ED 025 dtd 8/2/82
Houston, Texas	*A Compilation of General Statistical Information* (August 1982) *Budget*, 1982-83
Kileen, Texas	*1982-83 Budget*, (Kileen Independent School District, Aug. 1982)
Memphis, Tennessee	*1982-83 Budget, Memphis City Schools* (School Board, June 1982)
Milwaukee, Wisconsin	*Milwaukee Public Schools Approved Budget, 1982-83* (undated)
Montgomery County, Md.	*FY83 Operating Budget*, May 1982 *Statisticals Profiles 1981-82*, January 1982.

EXHIBIT 11-7

SUMMARY OF SOURCES OF DATA, BY RESPONDENT

RESPONDENT	DATA SOURCE
State of Nevada	Submitted completed data form
State of Rhode Island	Submitted completed data form
San Diego, California	Pupil Accounting Report, 6-18-82 Annual Financial & Budget Report, Aug. 31, 1982 Report #10 (Personnel), March 31, 1982
Seattle, Washington	Budget, Fiscal Year 1982-82 (Seattle School District #1, June 1981, Form #F-195)
State of Wyoming	Submitted completed data form
York, Pennsylvania	Budget, 1982-83 (Aug. 1982)

EXHIBIT 11-7

SUMMARY OF SOURCES OF DATA, BY RESPONDENT (cont.)

CHAPTER 12

BUDGET AND FINANCE

FISCAL MANAGEMENT

During October and November 1982 project staff conducted extensive interviews in the following DoD offices currently providing finance and accounting services to DoDDS:

Upper Heyford, U.K.
Swetzingen, Germany
Torrejon, Spain
Rota, Spain
Vicenza, Italy
Naples, Italy
Hellenikon, Greece
Clark, Philippines
Yokota, Japan

Interviews were also conducted with resource management staff of ODS and the Regional Offices and senior military commanders. Within the scope of the comprehensive study no attempt was made to conduct a detailed systems analysis of DoDDS fiscal operations. The General Accounting Office and the Defense Audit Service have performed such evaluations, and their reports were a major source of data. The field interviews sought to extend the staff's understanding of the context of these reports and to ascertain if the recommendations arrived at by GAO and DAS were appropriate when viewed from the field. GAO's November 1982 recommendations to the Secretary that parallel areas of inquiry of the Comprehensive Study are:

- Develop accounting and internal management control systems in DoDDS as required by the Budget and Accounting Procedures Act of 1950.

DoDDS has no accounting system of its own. Financial information is provided by multiple nonuniform accounting systems, which limit the utility and comparability of the information available to those responsible for management of the school system's fiscal resources. DoDDS has initiated action to design its own accounting system which will provide uniform information to its managers. Professional resource managers in the military offices they deal with uniformly reported inadequate staff with DoD resource management skills at the regional level and at ODS. However, some hiring of additional resource management staff has occurred recently.

Evidence of the lack of adequate control systems was provided by senior military and civilian personnel at the finance and accounting offices. Supplies were often reordered with no deobligation of previously obligated funds. Principals often took the position that they could not submit supply orders during one school year for the following year's teachers, so supplies often arrived late in the school year. Many obligations that occurred in large numbers at the end of the fiscal year were reportedly not followed by spending designations. In some cases payroll and supply obligations were not validated by DoDDS. Current work on budgetary and accounting systems addresses this deficit.

Another concern raised by these experienced resource managers was DoDDS' history of obligating major portions of its O&M funds in September, in contrast to other DoD agencies and activities that typically obligate most of their nonpersonnel funds by the third quarter of the fiscal year. ODS practice has been to withhold O&M funds each year in the event that Congress does not authorize the pay supplemental during the spring/summer of the current fiscal year. OSD budget examiners indicated that DoDDS is the only agency following this policy. DoDDS reported that it has now received authorization to estimate pay increases in original budget submissions. Pay, however, is almost 70 percent of DoDDS costs, and supplies and equipment are the only major flexibility in the DoDDS budget. Therefore in fiscal years during which DoDDS operates under continuing resolution, year-end funds will probably continue to provide many of DoDDS necessary supplies.

Disparity was also found between the manner in which the system is operating and the way ODS has instructed it to operate. Complex coordinators are responsible for first-line validation that services have been received. This is the lowest level in the system where the documents describing authorized services are to be maintained. However, 96 percent of school principals reported performing this validation function. Only 28 percent did so through their complex coordinator.

ODS has recently increased headquarters level staff to allow development of an accounting system that will provide the necessary internal controls. ODS indicates that administrative staffing levels throughout the system are being re-evaluated to assure that sufficient trained personnel are in place to properly support and use the system once designed and implemented.

To enhance the management control capabilities of a standardized accounting system, DoDDS should reinstitute the earlier practice of maintaining an internal audit function at the regional level. DoDDS currently depends exclusively on DAS for audit services. In the past DAS audits have been topic specific and tend to draw samples on a regional basis. Management practices and personnel were found to vary significantly across regions, raising the question of the adequacy of this approach. A field-based function is necessary to investigate problems that arise at the school level, the adequacy and currency of Interservice Support Agreements, potential fraud and abuse in such areas as payroll and travel, and to review the processing at finance offices. Such functions are not routinely being performed, and the personnel are not available to perform them. This condition will remain until DoDDS establishes its own accounting system and can enforce its own requirements. ODS or Regional Office finance or logistics staff should be encouraged to increase visits to military finance and accounting offices to become acquainted with problems and concerns firsthand.

- Develop a uniform financial coding system applicable to DoDDS activities worldwide.

Finance and accounting office personnel repeatedly expressed concern about the large and nonstandardized number of accounting codes being utilized by DoDDS. Planning for a Dependents Schools Management Structure (DSMS) was begun in 1980, and testing of the system commenced in two regions in October of 1982. ODS states that the system will be implemented fully in October of 1983.

Ideally, the system DoDDS implements will allow entry and reporting in terms of unique school codes and a fixed number of functional categories to encourage monitoring and accountability at the school level. The information in this system should be flowed down to allow consistency of management and sound management at the basic functional level, the school. Four out of 10 schools currently rely solely on accounting information provided through their Regional Offices, while 6 out of 10 have developed school unique accounting files. The scheduled introduction of regional and school level information management systems by October of 1983 should solve part of this problem.

- Establish a streamlined procedure for recording disbursements of DoDDS funds in the school system's accounting records.

In compliance with DoD procedures, disbursement vouchers now travel from overseas to ODS and back overseas. This process takes between two months and two years, resulting in unliquidated obligations on the books of the Regional Offices. Timely and accurate information is thus not available to Regional Directors for them to comply with Anti-Deficiency Act provisions that prohibit authorizing or incurring expenses in excess of appropriations. A proposal by DoDDS to correct these deficiencies has been made to the OSD Comptroller. ODS expects, when approved and implemented, this problem should be alleviated.

- Return to the reimbursable concept in obtaining logistics support services.

At the time of this study, the practice within DoDDS in regard to the management of logistics support service financial

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resources in effect delegates responsibility for control to the military services providing the support. Specifically, military services cite DoDDS funds directly for support provided. This further reduces the ability of DoDDS to properly manage the resources for which it is accountable. While no gross negligence or mischarging has been reported to occur, the procedures are open to such abuse. Further, DoDDS resource managers lack even additional information on the amount of funds that have been obligated.

ODS reported that in response to GAO criticism this practice will no longer be employed as of the 1984 fiscal year. This will result in DoDDS' assuming increased responsibility for management control. Staffing levels are being examined to assure adequate personnel in the Regional Offices to process the information that will begin to flow through the system.

- Develop and implement a financial management training program for school principals.

In February of 1982 DoDDS initiated its Administrator's Academy to provide training for school principals. A financial and logistics management module is included among the workshops presented through the Academy. Principals themselves recognize the need for such training. Thirty-nine percent of DoDDS principals rated the training they received in fiscal matters as adequate. Twelve percent reported having received no such training.

Fiscal, budgetary, and logistics matters consume less than 25 percent of 9 out of 10 principals' time. Given the critical role of the principal in the educational process, the time spent on administrative matters should be held to a minimum. Proper tools and skills are a way of ensuring efficient use of time and minimizing abuses of the schools' support systems.

Current DoDDS policies suggest teachers should contact principals first when problems arise in regard to payroll issues. After bringing problems to their principals' attention teachers are to contact payroll offices directly. These offices reported receiving a large number of phone calls weekly from teachers making repeated inquiries regarding cost-of-living adjustments, pay rates, pay periods, and the like. Some isolated instances have even been reported of notices being posted in DoDDS schools encouraging teachers to flood the respective military support office with phone calls. We regard this practice as abusive and counter to DoDDS' organizational interests. Many if not most questions could be answered by one professional or administrative individual at each school who has been thoroughly briefed on salary and benefits calculation and has access to sound information. The informational brochure developed by USAFACEUR with staff assistance from DoDDS explains these computations in a simple and direct way, and should be distributed to all DoDDS employees periodically.

Consideration should be given to the impact increased management control in the system would have on principals and the level of training appropriate for principals. In implementing expanded fiscal and logistics management systems the burden on principals should not be increased, only their skills refined to allow them to fully support the system. In that DoDDS would be performing some functions it does not now perform, it may be appropriate to provide additional administrative support to principals in the area of resource management.

BUDGET DEVELOPMENT AND ALLOCATION

The budget development and allocation process within DoDDS has as its primary purpose supporting the operation of schools either through direct or indirect application of resources. Three out of four principals perceive that this process is functioning properly in that their schools receive their fair share of funds.

The school budget, from the perspective of principals, is primarily a matter of staff positions, approval of requests for such things as purchase of major equipment and nonrecurring maintenance, and the allocation of funds for transportation, supplies, and equipment. While the majority of principals report they are receiving their fair share of funds, only 36 percent perceived the 1982-83 school level budget for supplies and equipment to be adequate. It should be noted that as of May 1983 the DoDDS FY83 budget was $34 million below the adjusted prior year amount as a result of operating under continuing resolution. Further, no correlation was found between principals' assessment of adequacy of this budget and their assessment of the adequacy of the materials it allows them to purchase, which were rated highly.

The involvement of principals in the development of the DoDDS budget varies according to regional practice. Three-quarters of all principals report initiating estimates at the school level. Variation is found in what their submission covers. School supplies and equipment budgets are almost universally initiated by principals, while less than half of the principals are involved in developing travel, TDY, repair and maintenance, and staff aspects of the budget. At the school level the perception is that where the school provides input, its budget submission influences its funding. Yet these submissions were characteristically referred to as "wish lists" by those preparing them. Regional Office personnel who review school budget submissions expressed concern that principals often do not take the task seriously, and their requests should be given close scrutiny.

Not only does the practice of budget development vary across regions but many of the details of the guidelines also vary. Staffing and equipment guidance is standardized systemwide; however, this is not the case with other aspects of the budget which are left to the discretion of Regional Offices.

It is recommended that DoDDS reconsider its budget development process so that (1) more information and documentation flow up through the system and (2) this information is based on more standardized principles. One example of the dissimilarities occurring across regions is found in school level budgets for supplies and equipment. While systemwide this budget averages approximately $60 per pupil, significant differences exist in the average appropriations to schools across regions. Based on principals' reports of their supplies and equipment budget allocations we find the following:

Panama	$84
Germany-North	$80
Atlantic	$67
Mediterranean	$58
Germany-South	$46
Pacific	$38

It is recommended that for budgeting purposes DoDDS develop and utilize what may be termed program structure costs, that is, costs attributable to the existence of a given organization, and premised on a model organization chart, staffing plan, and table of plant and equipment. This model should also define the number of service outputs the basic program structure can produce. For DoDDS, this would be a maximum number of students capable of being taught by a given school or school complex with the mandated resources. More broadly put, program structure costs in DoDDS would be organized as follows:

Unit	Program Structure Elements	Outputs
School	Building, Maintenance, Supplies, Equipment, Staff (Including Some Teaching Positions), and the Like	Students Taught Per Year
Region	Organization Structure, Staff Materials	Schools Supervised
ODS	Organization Structure, Staff, Materials	Regions Supervised; Special Programs Managed

These program structures would be costed, and the basic number of students served within the structure defined. The program structure costs would then form the equivalent of a fixed cost base for service delivery from which DoDDS budgeting for students in excess of "program structure" capacity would proceed. Development of the costs would take into account variables such as size of school, country, and dispersion of students.

To complement the "program structure" costs approach outlined above, it is recommended that detailed analysis of cost elements related to provision of student services be conducted, and a standard cost be developed for each element. Cost elements might be both conventional cost objects and program service costs; what would be sought is a mix of such elements which would define the incremental cost associated with each new student entering DoDDS. This would be a historical cost study to determine both the current cost or pricing of each element of educational service, and the long-term trend, so as to predict future costs. Typical elements might include:

- Instructional personnel costs
- Books
- Supplies and materials (used by the student individually)
- Materials and learning aids (used by groups of students, e.g., audiovisual materials)
- Health Services
- Transportation
- Special program costs, such as:
    - Special Education
    - Vocational Education
    - Athletics and Extracurricular Activities
    - Art and Music
    - Science and Math Enrichment
    - ESL

The result would be a refined student-year standard cost of the type discussed earlier. This standard cost would be applicable to each new student in excess of the program structure capacity of DoDDS. This would greatly facilitate budget justification, since the Department, OMB, and the Congress could be given a basic cost projection in the form:

(Program Structure Cost) + (Standard Cost x Number of Incremental Students) = Budget

This could, of course, be adjusted annually for pay cost changes, inflation, and the like and would be supported by detail developed and documented at the Regional level.

Development of Improved Budget Formats

Much of the format of budget submissions to the Department and OMB by DoDDS is mandated from those organizations (e.g., by OMB Circular A-11). To facilitate understanding, however, certain additions to the existing formats could prove very helpful. Recommended changes are the following:

- Include "At-a-Glance" Tables. These would be one-page tables cross-walking:
    - Programs against organization units
    - Programs against object class costs
    - Organization units against object class costs
- Each table would summarize total DoDDS or total unit costs for a single fiscal year. Cross-referencing or footnoting would reflect the relationship of the items to the other tabulations and justifications.
- Prepare Unit-by-Unit Summary of Changes. For each unit, changes in budget by program should be presented.
- Narrative Justification. For each change in program by unit, provide a narrative explanation, computing the amount and defining the reason or cause of the change.

It would be valuable to explore the best approach to incorporating such format changes in existing budget materials. Some of these and other format changes have been included in DoDDS' revised summer 1983 budget instructions, but ODS maintains only regional information, not school level data. Although some change in budget format is desirable and is being achieved, DoDDS must continue to conform to the format provided by the Department of Defense.

CHAPTER 13

DECISION MAKING AND POLICY DEVELOPMENT

The assessment of DoDDS decision making and policy development functions proceeded from the position that (1) for these functions to be performed appropriately, information on which to base decisions must be available, and (2) those having review authority external to the organization would perceive the functions as being carried out effectively. Information requirements were defined as being those needed to carry out the following responsibilities:

- Strategic Planning, which refers to the process of deciding on objectives, changing objectives, allocating resources to meet objectives, developing policies, and monitoring resources acquisition
- Management Control, which refers to the process used by managers to obtain resources that meet objectives
- Operational Control, which refers to the process of assuring that specific tasks are carried out effectively and efficiently

Exhibit 13-1 provides the detailed structure that was used for assessment. It should be noted that it was in this area of the system's management that the most developmental activity was found to be occurring within DoDDS.

STRATEGIC PLANNING AND MANAGEMENT CONTROL

In a public service organization such as DoDDS the concept of strategic planning is best evidenced through the budget process. As part of this process the system addresses the broad

DECISION-MAKING HIERARCHY	ORGANIZATIONAL LEVEL INVOLVED	DECISION OBJECTIVES	DECISION PROCESS INPUTS	INFORMATION SOURCES	DECISION PROCESS OUTPUTS
Strategic Planning	President, Congress Deputy Assistant Secretary for MRA&L	• Set objectives	• Staff Studies	• Special "one-time" reports	Goals
		• Determine resources to be applied	• External situation	• Simulation	Policies
	DoDDS Director		• Reports on internal achievements	• Inquiries (Unrestricted)	Constraints
Management Control	DoDDS Director DoDDS Headquarters DoDDS Regions	• Allocate assigned resources to task	• Summaries	• Many regular reports	Decisions
		• Make rules	• Exceptions	• Format variety	"Personal" Leadership Procedures
		• Measure performance		• Inquiries (Restricted)	
		• Exert control		• Data-Bank oriented	
Operational Control	DoDDS Regional Office Military Command	Use resources to carry out task in conformance with rules	• Internal events	• Formal	Actions
	DoDDS District Office			• Fixed procedures	
	DoDDS School Administrators			• Complex	
	School Personnel			• Concrete	

SOURCE: Adapted from Sherman C. Blumenthal, Management Information Systems, page 29. (Englewood Cliffs, NJ: Prentice-Hall, 1969)

EXHIBIT 13-1

AN INFORMATION SYSTEMS PERSPECTIVE OF DoDDS questions about where the system is going, defines new initiatives, determines preferred courses of action, and obtains concurrence of those above in the chain of command (i.e., the Department of Defense and the Congress).

A formalized, integrated process for planning and budget development based on programmatic objectives has been neglected in the past. Through FY83 there has been extreme variation, at the regional level, in how the budget requests submitted to ODS are developed. One region, reporting itself to have a bottom-up program-based budget process, requests school principals to submit their requirements for textbooks, supplies, and educational equipment only. Another region circulates detailed budget guidance relative to all major budget line items to all schools. It is the sum of information gathered through these diverse means that is the source of data referenced by ODS staff when compiling the region level and below component of the system-wide budget request. With a few important exceptions, the general directionality in budget development has been downward, rather than upward from discrete programmatic elements at the school level.

Beginning with the FY84 budget cycle DoDDS has adopted a participatory budget system that more fully involves the regional headquarters in the preparation and defense of the DoDDS budget and in the distribution of assets. Senior management expects this more open approach to budgeting will eliminate the adversarial relationships between regions and reduce retention of contingency funds at the regional level. DoDDS also reports its plans to move towards standardization of school level budget inputs and has begun an increased program of education and training of administrators. ODS anticipates this, in conjunction with the Regional Information Management System (RIMS) and the School Information Management System (SIMS), will give the administrators the tools they need to become managers.

DoDDS' budget has increased annually since 1978, as shown below:

FY79	$313,644,000
FY80	$342,803,000
FY81	$369,300,000
FY82	$396,693,000
FY83	$418,511,000

Those in OSD involved in review and approval of the DoDDS budget report that while growth has occurred, the process has not been an efficient one due to the inability on the part of DoDDS to clearly articulate its needs. The need for such clear articulation to ensure an efficient process is of prime importance. DoDDS is highly visible, being different in many respects from other defense agencies participating in this process.

Up through the FY83 budget cycle, budget hearing experience has included instances of ODS administrators being unable to provide consistent counts of students and teachers to define budget requests. The individuals who understand the data used in developing the budget (i.e., the Regional Directors) have not always been sufficiently involved in budget defense.

DoDDS reports that, subsequent to the period of data collection for this study, a standardized format for regional budgets has been produced, and a Regional Information Management System is scheduled for implementation. The planned system will allow identification of school level budgets for those items that are discretionary at the school level and will permit tracing of execution data. Continued intensive attention on the part of DoDDS senior administrators to the implementation of a system with such capability is strongly encouraged.

Those external to DoDDS who are responsible for budget review also report that data on relative effectiveness of alternative strategies and approaches to a wide array of logistical and instructional services have not been provided in the past. Such information is the product of systematic research designed specifically to aid decision making by providing evidence regarding the degree to which a program is meeting its stated objectives (i.e., program evaluation).

Systematic program evaluation is undertaken by DoDDS through:

- The annual systemwide testing program
- The five-year curriculum review process
- NCA Accreditation
- Educational evaluation programs of the regions

The first two approaches are comprehensive ongoing systemwide programs of applied research. As with these programs, the NCA Accreditation process is an essential activity providing valuable information. Although data from NCA evaluations are drawn together and discussed, a formal analytic framework applied to this information could enhance the information available to decison makers. While useful as it is structured, the cycling of curricula through the five-year assessment does not provide the opportunity to examine interactions across subject areas and does not provide data on the success of the educational program as a whole. There is some evidence of redundancy between ODS sponsored testing and regional evaluation programs. The utility of the data bases DoDDS has produced through its educational assessments cannot be denied. From a management perspective, however, ODS administrators have been limited in the use they could make of these data bases. ODS is acquiring an internal analytic capability that will increase its ability to access these systems. Until acquisition is complete, it is fully dependent on DMDC to produce special analyses, a dependency atypical of stateside systems of similar size.

Evaluation of DoDDS functions that are supportive of the educational program (e.g., logistics, finance, and accounting) do not undergo comparable systematic evaluation. Studies by the Inspector General and General Accounting Office do provide information in this vein. These studies, however, are designed to answer questions posed outside of the system, not in response to the needs of DoDDS decision makers. DoDDS can, and does, request assistance from the Defense Audit Service to answer specific internally developed information requirements. These are currently ad hoc. ODS reports that a systematic planned program for such assessments is being formulated.

A shortcoming of past studies performed in the areas of logistics and finance is that they are not designed to assess the effectiveness of these operations in meeting the educational objectives of DoDDS. For example, a recent GAO study strongly encouraged DoDDS to increase the local hiring of full-time teachers. The design of that study looked at hiring practices exclusively from an economic perspective. No analytic consideration was given to the effect increased local hiring would have on the pool of substitute teachers essential to the smooth operation of educational programs. By relying solely on external resources for these types of evaluations, information sensitive to DoDDS objectives is not readily available to DoDDS administrators and policymakers.

MANAGEMENT CONTROL AND OPERATIONAL CONTROL

During the past eight months DoDDS has initiated intensive activity designed to create a management information system that contains provision for automated data processing. While in its initial stages, the system is expected by ODS to alleviate a major portion of the deficiencies cited in the following discussion. During the data gathering period for the current study, little evidence was found of the tracking of program and subprogram costs, personnel, or outcomes. The preceding chapter provided discussion of shortcomings in the accounting process currently in operation that limits the information available to managers to track expenditures against their budgets. The ability to manage fiscal resources has been hampered further in recent budget cycles by continuing resolution authorities in lieu of appropriations and the late appropriations of funds for teacher salary adjustments. The effect of the budgeting phenomenon on managers is compounded by limited information. Some, but not all, regions maintain information that allows them to react promptly and rationally to sudden "windfalls" when funds are released late in the school year. Others do not use information on school-level programmatic needs to respond in this way.

The information available to managers is further limited by DoDDS' dependence on the military for support services. There is no routine coordinated system of linkage between provider of service and requestor of service. The most obvious case of this is in the area of accounting, where each branch of the military provides reports in their own format according to their own unique expense categories. The DoDDS accounting system under design should alleviate this situation. But this is not the only area of military support. All personnel services are provided through the military. Information on personnel subsequently resides in the various CPO offices. It is available to DoDDS on request, in the format and within the time frame established by the service provider. The situation is similar in regard to other services provided by the military.

DoDDS has been affected by this decentralized unstandardized data network. When information is required to answer a management question, there is a worldwide or regionwide (as the case may be) effect. Staff are pulled away from operational responsibilities to track down and compile needed data, often with little definition of the data requirement. One request for information in the fall of 1982, appearing as a single sentence, triggered on-site inspections of all schools. The information compiled by one region in response to this request was measured in terms of feet; other regional responses were measured in pages.

While questions have been raised over the years regarding the fact that 10 percent of DoDDS' budget is devoted to student transportation (compared to an average 5 percent stateside), DoDDS has not been in a position to justify the expense because transportation is the responsibility of the military. Regional Offices find it difficult to identify problematic spending patterns for lack of adequate and standardized data. The data reside at individual military installations, developed by transportation officers in accordance with DoD guidance but interpreted under individual service and command instructions.

DoDDS has completed the design of a school level management information system and has conducted an information needs assessment at the ODS and regional levels. When implemented, these systems should facilitate the upward flow of information to the system's managers and decision makers.

The downward flow of information is also critical within an organization--particularly one as geographically dispersed as DoDDS. Such downward distribution of information provides information needed to guide those making management and operational control decisions. It is also essential to ensure that those assessing the system and its schools from outside the organization have an accurate perception. It is in DoDDS' best interest that perceptions be accurate to ensure that behavior toward the system is appropriate.

There is evidence of miscommunication between DoDDS, as a system, and those on whom the system depends for service. Interviewers were continuously informed by military personnel, at all levels, of cases of mismanagement in DoDDS or of situations where they were highly critical of decisions made by DODDS. While some of these cases could be documented, others could not. For example, the tale was often told by community commanders that DoDDS "bobtails" the facilities it builds in order to spread the funds it receives under MILCON. This is not the case, but the perspective exists that DoDDS managers are making decisions that are not in the best interests of the schools.

DoDDS managers do not have to explain and justify their actions to all persons claiming an interest in the school system. But it is in the system's best interest that those requested to act on DoDDS' management decisions have a basis for respecting those decisions.

RECOMMENDATIONS

A requirements-type budgeting process should be implemented uniformly throughout DoDDS, with staff providing necessary training and guidance to personnel at all levels regarding current and five-year budget development.

Elements that should be included in the development of program level budget justifications include:

- Enrollment projections and the basis for the projections; currently these are obtained from the military services.
- Total amount requested for the activity with special emphasis on the rationale for changes from the current year estimate.
- What would be accomplished for the target population and why this is important.
- Where the request is lower than current levels, an explanation of the reasons for the reduction (i.e., cost-saving measures, change in DoDDS role, diminishing need, program consolidation, current fiscal restraints, etc.). A description of the anticipated impact, if any, on the target population and how parents or other public and private groups may assume the financial responsibility should be given.
- Evaluation results, including educational and GAO findings, which support proposed changes in strategy. Evaluation results used can be positive or negative, but should support the budget strategy. Evidence of effectiveness other than formal evaluation results may be used.
- Relationship of activity and/or strategy to DoDDS Director priorities or DoD priorities for the budget year.
- Descriptive measures for the past, current, and budget years which can be quantified and which give a quick indication of the tangible results of the program. Care should be taken in choosing data that are tied to the objectives and strategies of the program. The numbers may identify per-pupil expenditures, number of hours per week of training, and number of participants served. Several measures should be included for each program (decision unit).

Highly specific budget preparation guidance and training of administrators at all levels will be necessary to assure proper implementation of these budget directives.

An "alternative level" request should be required for certain decision units each year in order to ascertain the likely impact of expanding, contracting, or eliminating specific DoDDS programs and activities. In this instance the same detailed rationale and associated descriptive measures would be prepared for the alternative level budget.

Requirements-type program budget justifications are to be initiated at the lowest levels of the system and built up to a systemwide level on an annual basis beginning in FY84. These integrated budgets should be used to provide, for the first time, a fully articulated and justified DoDDS budget formulation that explicity shows program decision unit tradeoff considerations, and provides a formal accountability mechanism for subsequently measuring resource managment performance at every administrative level including the school-building level.

To complement and support this budget process DoDDS should develop a strategic (long-range) planning capability and program. Such planning should involve an analysis of environmental influences affecting the organization and its mission, including demographic trends, economic factors, technological concerns, and education conditions. This planning should include frequent consultations between the DoDDS Director, Regional Directors, and other division heads to assure responsive support to new issues and policy questions as they emerge, and to provide these decision makers an early opportunity to participate in the formulation of the assumptions guiding the planning process. Although one outcome of this process would be an annual coordinated DoDDS Program Objective Memorandum [POM] projecting financial needs for the next five years, we envision a broader and more open-minded planning activity that would extend beyond the requirements of POM development.

The evaluation activities now undertaken by DoDDS should be expanded to be a comprehensive, coordinated activity that provides information on all aspects of the system. An evaluation plan should be developed that includes the education assessment program now in place, integrates the evaluation of support services, and provides Central Office access to certain information now reviewed only at the regional level. The evaluation activities of the Regional Offices and ODS should be coordinated, and regions should not duplicate the information collection activities initiated by ODS. DoDDS is encouraged to continue its development of an integrated management information system and to move quickly, but carefully, to implementation.

Consideration should also be given to developing an in-house analytic capability. This would provide decision makers the flexibility to take full advantage of the information available to them. Two additional functions might be considered in conjunction with the information system and evaluation program: (1) the development of a centralized student data bank, and

(2) the initiation of a published Annual Education Report that would include current information and statistical summaries on student characteristics, faculty profile, detailed budget expenditures, curriculum changes, and findings of program evaluation and special research studies to interested military commanders and families, OSD, and the Congress.

The current development of a centralized student data bank should assure accurate and timely transfer of pertinent health and academic record data to receiving schools (both stateside and in DoDDS) in advance of student arrival. In addition, when implemented, the centralized student data bank will provide a unique and extremely important capability for conducting ongoing longitudinal research on the effect of DoDDS schooling (with appropriate controls for parent background and school transition) that would be impossible to obtain in any other cost-effective manner. With this analytic capability DoDDS will be in a position to directly estimate the outcome of a DoDDS education on its students.

CHAPTER 14

STRUCTURE AND ORGANIZATION

Preceding the merger of Germany-North and Germany-South on January 1, 1983, DoDDS was organized into six Regional Offices and a Headquarters Office (ODS) in Alexandria, Virginia. Four of the five current regions contain subregional structures (EPAs) which will be referred to as district-level organizations here. Some of these EPAs have been given a supervisory role in relation to school principals within their assigned geographic areas.

A concern that emerged from our interviewing and data collection was the enormous variability in the supervisory span of control existing across regions. In locations where district EPAs are delegated direct supervisory responsibility for school principals, one typically finds a more reasonable span of control extending to 10-15 principals.

A second area of concern that surfaced in our interviewing was the widespread perception that DoDDS is top heavy with administrators. This belief was pervasive among military commanders, principals, teachers, parents, and even Regional Office staff. Careful examination of staffing data reported for large school systems nationwide reveals that this concern may be well founded. DoDDS currently reports that ratios of students/central-office professional staff are lower than those for comparable school systems stateside, despite substantial administrative support in the personnel, finance, and accounting areas outside of DoDDS. However, DoDDS not only fulfills the role of a local school system but also carries out responsibilities assumed by stateside State Education Agencies and intermediate or regional educational service units.

A third issue that emerged from the data collection effort was the extent of operational functions performed at the DoDDS headquarters level. Certain operational responsibilities were deliberately established at both ODS and regional levels. Rather than finding the differentiation between policy/planning (ODS) and operations (region) articulated in DoDDS publications, considerable overlap was discovered in functions across levels, with little evidence of strong policy and planning leadership from ODS. Recent steps taken by ODS to design and implement a management information system, as well as a school improvement program, suggest that top management attention is beginning to be directed toward these deficiencies.

A fourth area of concern that surfaced in our inquiry was the apparent unevenness in the quality and responsiveness of personnel services provided by Civilian Personnel Offices. More than a third of all school principals report these services as unsatisfactory, a level unequaled by any other DoDDS support activity. This finding is perhaps reflected by the sentiments of CPO Directors themselves, almost half of whom would not object to DoDDS' providing its own personnel functions rather than depending on CPO support.

Finally, a fifth major theme that evolved during data collection was an apparent imbalance across all organizational levels in the allocation of personnel and the effort given to resource management. Few professionally trained resource management specialists exist at any level of the DoDDS system at the present time. Efforts have been initiated only in recent months to develop a management information system that might provide timely inputs to the budget planning cycle. These deficiencies have contributed, in our judgment, to such problems as inaccurate forecasting of student enrollments, GAO reports critical of DoDDS' financial and accounting practices, and inadequate strategic and long-range planning.

In this chapter a reorganization of the system is proposed as a means of addressing these problems in a coordinated manner. In the first section a revised regional and district organizational plan is discussed. The rationale of this structure is reduction in the number of professionals above the school level, and location of educational and resource management specialists closer to the school level. Next, a new management structure is presented for ODS, regions, and districts that more clearly differentiates policy and planning functions from operational functions, while strengthening the emphasis on integrated resource management at all levels. In the third section, specific staffing allocations are proposed to demonstrate how the new structure could be manned in an efficient and effective manner. The final section presents an organizational plan that would enable DoDDS to provide its own personnel functions rather than receive this support from CPOs.

REGIONAL CONSOLIDATION AND DISTRICT ORGANIZATION

The previous 6 DoDDS regions employed 425 persons at the Regional Office and the district levels. With the exception of Panama, Regional Offices have had roughly equal complements, despite greatly different student enrollments (varying from approximately 14,000 to 44,000 students). On-board staff as of December 1, 1982, is shown in Exhibit 14-1.

This replicated staffing posture across Regional Offices, together with the staffing complement in the Headquarters Office, has produced lower ratios of students/central-office professional staff than would be expected for a large school system. This disparity would be even greater if the professional staff outside DoDDS who are providing various administrative support functions to DoDDS (i.e., CPO, military finance, and accounting) were counted as they are for comparative figures from other school systems. The comparative ratio of students/central-office professional staff for school systems nationally having more than 25,000 students, 2 combination SEA/LEAs (Hawaii and District of Columbia), 1 large LEA similar in size to DoDDS, and DoDDS are as follows:

Type	Enrollment	Ratio
Large School Systems	>25,000	577
Combination SEA/LEA (Hawaii)	161,387	845
Combination SEA/LEA (D.C.)	93,545	538
Fairfax County, Virginia	123,675	509
DoDDS	138,860	441

	ODS	ATL	GER-N	GER-S	MED	PAC	PAN	TOTAL
Director	6	2	3	6	3	3	3	26
Exec. Services	9	8	8	11	11	6	5	58
Education	33	22	27	23	24	23	18	170
Logistics	12	13	16	15	13	9	7	85
Fiscal	15	10	12	17	15	8	7	84
Personnel	22	8	9	6	7	6	5	63
District	0	12	1	11	0	12	0	36
TOTAL	97	75	76	89	73	67	45	522

EXHIBIT 14-1

ODS AND REGIONAL STAFF
ON BOARD BY DIVISION

Each comparison shows DoDDS to have a lower ratio of students/central-office professional staff than comparable school systems, suggesting that DoDDS is overstaffed at the central office or above school level.

Central office professional level staffing can be controlled, in part, by reducing the number of Regional Offices from the current five to three, with the Atlantic, Mediterranean, and Panama regions being consolidated into a single region, as shown below:

Previous Regions	New Regions
Germany-North	Germany
Germany-South	
Atlantic	Atlantic/Mediterranean
Mediterranean	
Panama	
Pacific	Pacific

We recommend that the offices for these three new regions be located in Wiesbaden, Eastcote, and Okinawa.

The situation of the Panama Regional Office involves several special considerations. The recently concluded treaty with Panama requires that the U.S. not increase the functions or personnel associated with any activities currently being conducted in Panama. Although the elimination of a DoDDS Regional Office in Panama would appear to be consonant with the treaty terms, it may be desirable for military or political reasons to consider a transitional status for Panama in which it would report directly to the DoDDS Director for the next one to two years, albeit as a district organization rather than as a DoDDS Regional Office.

If DoDDS regional consolidation is expanded, it is essential that the subregional or district-level organization be extended to provide immediate and direct supervision of school principals. We propose 20 District Offices, each supervising and providing administrative/management support to approximately 10-15 schools. The District Offices might be located by city and/or country, as shown in Exhibit 14-2.

MANAGEMENT STRUCTURE

DoDDS management needs to give priority consideration to revising the structure at the Headquarters level to:

- Facilitate short-term and long-range planning
- Better inform decision making through an expanded evaluation activity and/or an increased, accessible information base
- Coordinate budget development with planning and improve budget justification capabilities
- Maintain responsive support to congressional and Department of Defense needs

Activities that are operations oriented should be transitioned, where possible, to the Regional Office level. This further decentralization of operational activities should occur simultaneously with enhanced centralization of policy/planning and evaluation and monitoring functions at ODS. A proposed organizational structure for ODS that accentuates these objectives is shown in Exhibit 14-3.

Germany Region (8)	Bremerhaven
	Frankfurt
	Mainz
	Heidelberg
	Kaiserslautern
	Stuttgart
	Nuernberg
	Munich
Atlantic/Mediterranean Region (8)	U.K. West
	U.K. East
	Benenor
	Panama and Islands
	Spain
	Italy North
	Italy South
	Greece/Turkey/Bahrain
Pacific Region (4)	Korea
	Japan
	Okinawa
	Philippines

EXHIBIT 14-2

DISTRIBUTION OF DISTRICT OFFICES BY REGION

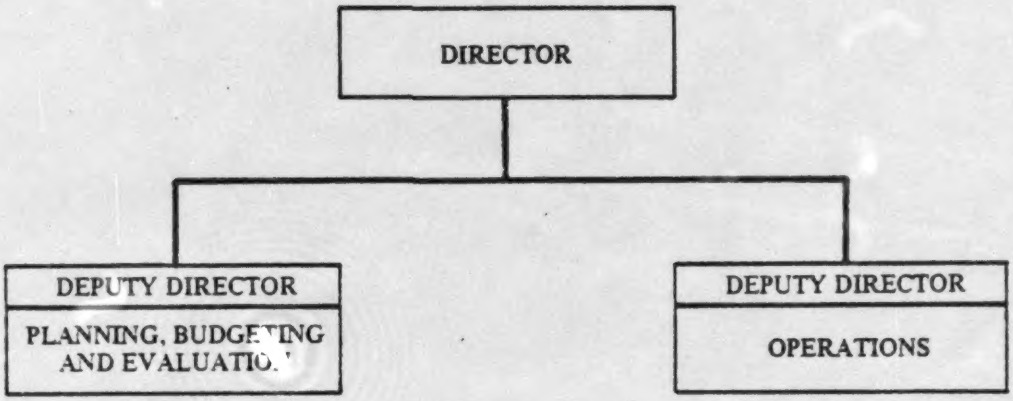
DIRECTOR
DEPUTY DIRECTOR
PLANNING, BUDGETING AND EVALUATION
DEPUTY DIRECTOR
OPERATIONS

EXHIBIT 14-3

PROPOSED ODS STRUCTURE

For the Regional Offices we propose a management structure that closely resembles the current regional organization (Exhibit 14-4). The current regional structure appears well suited to an operations orientation. We propose to streamline it further by dropping the Executive Services Division and merging necessary functions from this division into the Office of the Regional Director. As explained in a later section, most current roles in existing Regional Offices will be carried into the new structure, with one major exception: only a small Instruction Division staff will remain in the Regional Office, while most current Education Division staff will transfer to instruction units in District Offices.

The proposed structure of the new District Office is shown in Exhibit 14-5. We propose the assignment of 4 instructional or curriculum specialists to each of the 20 districts in the new regions. Skill areas would be balanced across adjacent districts so as to provide maximum coverage of content specialties within given geographic areas, while still maintaining the decentralized orientation of these support services. Additional content area assistance would be developed through designating selected individual teachers to occasionally provide consultation to other schools within their districts under the guidance of the curriculum specialists.

In addition, a professionally trained Resource Manager and Personnel Manager would work in each District Office under the direction of the District Administrator. These individuals would

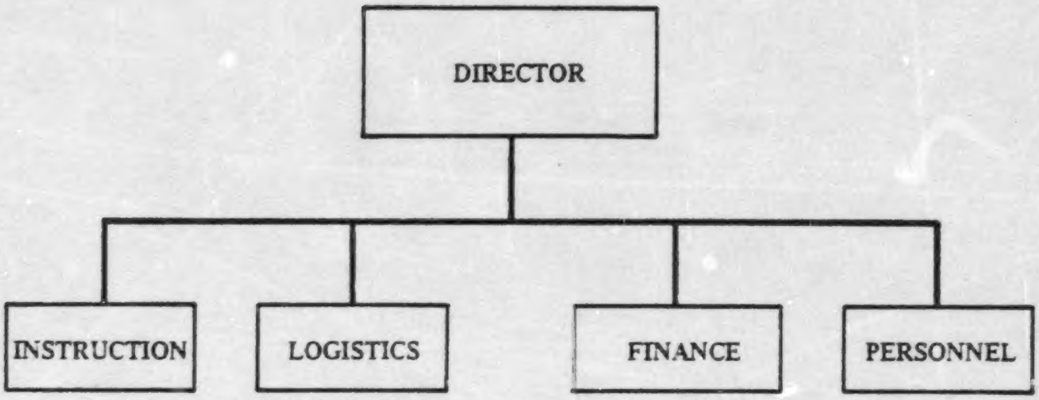
DIRECTOR
INSTRUCTION
LOGISTICS
FINANCE
PERSONNEL

EXHIBIT 14-4

PROPOSED REGIONAL OFFICE STRUCTURE

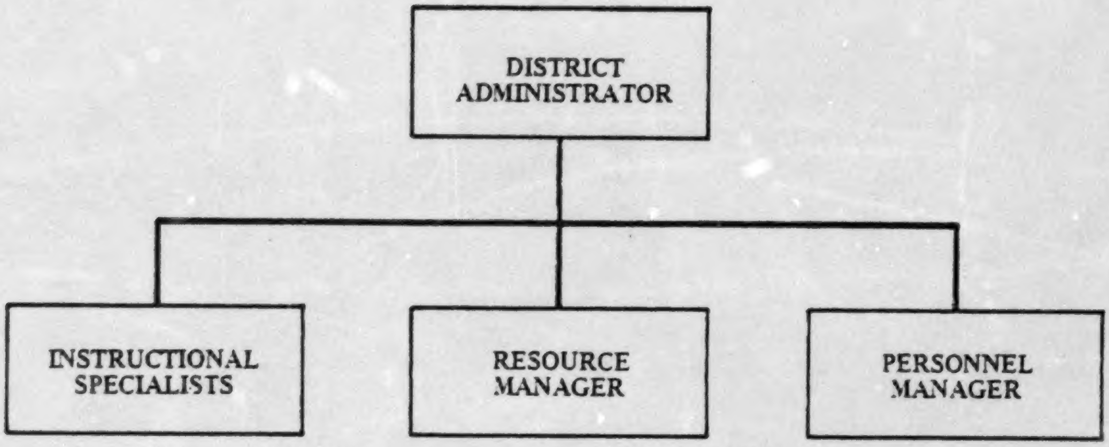
DISTRICT ADMINISTRATOR
INSTRUCTIONAL SPECIALISTS
RESOURCE MANAGER
PERSONNEL MANAGER

EXHIBIT 14-5

PROPOSED DISTRICT OFFICE STRUCTURE

be responsible for such activities as assisting schools in supply ordering, negotiating ISAs, monitoring budget and finances, and coordinating local personnel selection and transfer as directed by the District Administrator.

The proposed District Offices will play a crucial role in providing enhanced support to school principals. The instructional specialists and resource management specialists located in each of these offices will be able to form strong relationships with the 10-15 schools in their areas through frequent contact, and thus be able to provide more appropriate and timely assistance through their knowledge of the service needs of these schools. In addition, we have recommended that District Offices have primary supervisory and monitoring responsibility for special education staff working at the schools within their area. Staff development activities would also be initiated and provided from the District Office.

The reporting/supervisory relationship across levels would be quite simple: Regional Directors would report to the DoDDS Director, District Administrators would report to their respective Regional Directors, and school principals would report to their respective District Administrators. There would be no supervisory relationship between divisions or components at one level and similar entities at another organizational level.

PROPOSED STAFFING ALLOCATION

At several points in this discussion we have suggested the reassignment of significant numbers of Instruction (Education)

Division staff from ODS and Regional Offices to the district level. On the basis of the revised structure presented in previous sections, we propose an initial FY84 allocation of staffing as follows:

ODS - 55
Regions - 195
Districts - 180
TOTAL 430

As additional operational activities in the personnel, finance, and logistics areas are transferred from ODS to the Regional Office level over a 6-12 month period, we would recommend a further ODS staffing reduction by 15-20 positions at the GS-12 and below levels with a concomitant staffing increase in the Regional Offices as shown below:

ODS - 40
Regions - 210
Districts - 180
TOTAL 430

The 50 remaining authorized positions (of DoDDS' current 480 positions) above the school level might be reallocated to school level, for example, as Resource Managers reporting to principals of the larger DoDDS schools.

Exhibit 14-6 indicates the current grade distribution of the 522 DoDDS administrative staff (including district-related staff) on board as of December 1, 1982. In addition, we have shown the grade distribution under the proposed new structure.

	CURRENT STRUCTURE		PROPOSED STRUCTURE	
	No.	%	No.	%
SES	2	0.4	2	0.5
GS-15	11	2.1	9	2.0
GS-14	43	8.1	34	8.0
GS-13	83	15.9	69	16.0
GS-12	140	26.8	126	29.3
GS-11	36	6.9	30	7.0
Loc. Nat.	48	9.2	39	9.0
GS-9 or Below	159	30.5	121	28.1
Total DoDDS Staff	522		430	
Central-Office Professionals	315		270	
Students Per Central-Office Professional Ratio	441		514	

EXHIBIT 14-6

GRADE DISTRIBUTION FOR CURRENT
AND PROPOSED DoDDS STRUCTURE

The resultant ratio of students/central-office professional staff (514) more closely approaches that reported earlier for combination SEA/LEAs and for one large school system similar in size to DoDDS. Finally, Exhibit 14-7 shows projected division staffing levels for the new structure in FY84 and FY85.

Planning for Implementation

In order to appropriately execute this proposed reorganization, ODS will need to undertake early consultations with OPM and OSD regarding the development of revised functional descriptions for each of the new organizational levels, the development of revised job descriptions and job classifications for positions at each level, and potential personnel and budgetary actions that may be required to fully implement the plan. As these consultations proceed, ODS will need to revise current regulations and directives to reflect these respecified functions and activities.

INTEGRATED PERSONNEL FUNCTION

DoDDS principals by and large view the CPO support they are receiving as seriously inadequate. Thirty-five percent report that these services are unsatisfactory or very unsatisfactory. Perceptions of inadequacy are more marked for activities involving the processing of pay changes, handling of promotions, and the hiring of substitutes and local teachers. Structuring these personnel functions within DoDDS itself would create a stronger incentive and greater accountability for high quality performance for these vital personnel activities than could probably ever be achieved in the CPO organizational environment.

	FY84	FY85
ODS		
Director	5	5
Planning, Budgeting, and Evaluation	20	20
Operations	30	15
Subtotal	55	40
Region		
Director	6	6
Instruction	15	15
Logistics	72	77
Finance	72	77
Personnel	30	35
Subtotal	195	210
District		
Administrator	40	40
Instruction	80	80
Resources	40	40
Personnel	20	20
Subtotal	180	180
TOTAL	430	430

EXHIBIT 14-7

PROJECTED DIVISION STAFFING LEVELS
BY FISCAL YEAR

Twenty-eight CPO offices overseas were visited during the representative site data collection. A total of 65 FTEs (based on 195 individuals) were reported for the "time actually spent" providing DoDDS support in these offices. Tabulations of the number of DoDDS administrators, teachers, and support personnel who were reported as currently the responsibility of the CPO offices visited totaled 7,410 personnel. These numbers can be extrapolated to estimate the actual time currently being spent by CPO offices for all DoDDS personnel (excluding ODS). This ratio estimation procedure involves multiplying $\frac{11,053}{7,410}$ times 65 FTEs to derive an estimate of total time spent processing DoDDS-related personnel matters. This total time worldwide is estimated to be 97 FTEs, distributed as follows (based on detailed CPO interview data):

40 FTE	CPO/Chief/Specialist
15 FTE	Assistant
36 FTE	Clerk/Clerk Typist/Secretary
6 FTE	Miscellaneous

DoDDS has independently calculated the support necessary to maintain this personnel function at 140 positions (including training, technical assistance, etc., provided by organizations above the individual CPO office level).

CPO Directors generally view DoDDS activities as more complex and time-consuming than other activities. These Directors overwhelmingly (75 percent) view their DoDDS workload as increasing compared to 3 years ago. Many CPOs overseas report difficulty in hiring and retaining qualified personnel to staff their activities, due in part to grade constraints on their own staffing. Relatively little training specific to DoDDS processing activities is provided for on-board staff. Fully half of the CPOs rate the quality of DoDDS' CONUS-hired personnel folders to be poor or very poor when they arrive from stateside CPO offices. Two-thirds also indicate that DoDDS' CONUS hires are not properly prepared when they arrive in the foreign countries to which they have been assigned. When asked to react to the suggestion that DoDDS should provide its own personnel functions rather than depending on CPO support, 54 percent opposed the idea, 21 percent of CPOs favored this idea, and 25 percent were neutral.

How might this activity be implemented in DoDDS? We would propose that the same number of full-time equivalents reported by CPOs as actual time spent on DoDDS-related activities (97 FTEs) be allocated to incremental district level staffing so as to provide personnel services as close to the school level as possible. This number of positions would translate to approximately five additional personnel function slots on average in each new District Office. ODS would assume responsibility for communication and transfer arrangements for CONUS hires prior to their departure from the U.S.

Some have argued that transferring the CPO function to DoDDS would tend to distance this activity even further from DoDDS' school-level personnel, thus producing even more problems in the personnel area. Careful analysis of our data indicates that, on average, CPOs are already servicing a dispersed DoDDS population. The typical CPO services 285 on-board DoDDS personnel. If this function were executed within 20 DoDDS District Offices, the typical servicing load would increase to 556 personnel or an approximate doubling. It is likely that most District Offices will be in locations of high concentrations of DoDDS personnel. For a few remote locations DoDDS might wish to continue to contract for on-site CPO services, thus at least assuring continuity in personnel services provided in these locations.